

"THEY WAS IN THERE SURE ENOUGH"

**A LIMITED ARCHAEOLOGICAL ASSESSMENT OF THE 1864
CIVIL WAR BATTLEFIELD AT SPRING HILL, TENNESSEE**

GARROW & ASSOCIATES, INC.

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Submitted to:

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A handwritten signature in black ink, appearing to read 'Robert J. Fryman', is written over a horizontal line. The signature is stylized and includes a large circular flourish.

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July 1995

ABSTRACT

A limited archaeological field survey of the Civil War battlefield at Spring Hill, Tennessee, was conducted by Garrow & Associates, Inc., for the Spring Hill Battlefield Preservation Council. The purpose of the project was to survey and identify the Civil War battlefield resources of Spring Hill that would assist in delineating the boundaries of the core battlefield. A historical documents review was conducted to gather data on the locations and types of military activities in Spring Hill during the battle. Six areas were selected for examination by a limited archaeological survey. Archaeological fieldwork took place June 12-16, 1995. Three of the locations produced direct evidence of the military activities described in the various historical accounts of the 1864 battle at Spring Hill. Two locations, the Rally Hill Pike Tollhouse and the area occupied by Confederate General Johnson's Division on the night of November 29, 1864, did not produce any archaeological evidence of the military actions. However, the lack of evidence at Johnson's Bivouac result may reflect the limited nature of the archaeological survey and the ephemeral nature of this type of military activity rather than a finding of negative evidence. The location of the unmarked slave cemetery on the original Cheairs' family estate was not identified during the investigation.

As a result of the 1995 archaeological study, the position of General Luther P. Bradley's Federal infantry brigade was identified. The location of an antebellum house situated near Bradley's infantry line was tentatively identified by archaeological remains. The identification of these two battlefield landmarks greatly aids in establishing definitive boundaries for the core battlefield area. Further study and the acquisition of the property containing Bradley's Federal infantry position are recommended.

ACKNOWLEDGMENTS

Any cultural resource management project is the product of cooperation among diverse individuals; the Spring Hill Battlefield study is no exception. A debt of gratitude is owed to the members of the Spring Hill Battlefield Preservation Council, whose assistance was instrumental in the success of the field study. Ms. Alethea Sayers, president of the council, and Mr. Raymond Richardson, project administrator, played a pivotal role throughout the project. Their help in gaining property access, enthusiastic support, and sharing of information on the 1864 battle helped to make the Spring Hill Battlefield study a memorable experience for the field crew. Mr. Murray Tarkington and Mr. John Pierce, members of the council, freely shared their time and assistance in conducting the metal detector surveys.

Mr. Alton Kelly, APCWS board member, is thanked for his insights on the events at Spring Hill in 1864 and for making the principal investigator's 40th birthday a memorable one. The Saturn Corporation graciously permitted the field crew access to the Rippavilla estate. The field crew also wish to acknowledge Mr. Fred C. Selle for the information on the military actions on his property. Mr. Charles R. "Chuck" Brown and Mr. Douglas R. Cubbison of White Star Consulting are thanked for making their 1995 preservation plan available to the field crew and for their willingness to discuss the results of the 1995 archaeological survey with the authors.

Various Garrow & Associates staff members contributed to the project. Mr. Mitchell Childress, Assistant Vice President for the Memphis branch office, acted as project manager. The draft report was reviewed by Mr. Childress and Mr. Christopher Espenshade, Atlanta Branch Manager. Mr. Daniel Dolensky edited the draft and provided useful comments. Graphics for the report were prepared by Mr. Vincent Macek and Ms. Susan C. Walters.

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I. INTRODUCTION

Spring Hill is situated in Maury County, in Middle Tennessee (Figure 1). On November 29, 1864, the community was the scene of a major Civil War engagement. The town was occupied at various times throughout the war by both Federal and Confederate forces and experienced numerous difficulties and shortages brought on by the war.

Garrow & Associates, Inc., conducted a limited archaeological field survey of the Civil War battlefields at Spring Hill in June 1995 for the Spring Hill Battlefield Preservation Council. The project aimed to survey the Civil War battlefield and gather data that would assist in delineating the boundaries of the core battlefield. A historical documents review was conducted as part of the survey for information on the locations and types of military activities in Spring Hill during the November 29, 1864, engagement. After-battle reports in the *Official Records of the War of the Rebellion* (Official Records 1971), postwar studies and memoirs, and map collections were examined. Five military-related areas and one antebellum cemetery were selected for a limited archaeological survey. Each location was examined by pedestrian survey along a limited number of transects using metal detectors and flagging all positive readings. All flagged readings were noted on base maps for each location. A shovel test then was excavated at each reading to recover the artifact(s) and observe the stratigraphy. The cemetery was investigated through systematic probing along closely spaced transects to identify individual grave sites.

The archaeological fieldwork took place June 12-16, 1995. The locations included an unmarked slave cemetery on the Cheairs' estate, Confederate General Johnson's Division Bivouac area north of Rippavilla, Union General Luther Bradley's defensive position south of Spring Hill, an antebellum house site near Bradley's line that burned during the battle, Weaver's Hill (location of Confederate assault on Bradley's line and bivouac area for Confederate General John C. Brown's Division), and an antebellum Tollhouse Structure on the Rally Hill Pike. Three of the six sites produced direct evidence of the military activities described in the various historic accounts of the 1864 engagement at Spring Hill.

This report presents the methods, results, and recommendations of the 1995 Spring Hill Battlefield study. The environmental setting of the site is summarized in Chapter II. Chapter III discusses the methods of the archival search and limited field reconnaissance. The battle of November 29, 1864, is recounted in Chapter IV. Chapter V presents the results of the archaeological field survey at the six locations. An assessment of the Spring Hill Battlefield and recommendations are presented in Chapter VI. A bibliography and appendices containing the resumes of the fieldcrew and the Tennessee Site Form conclude the report.

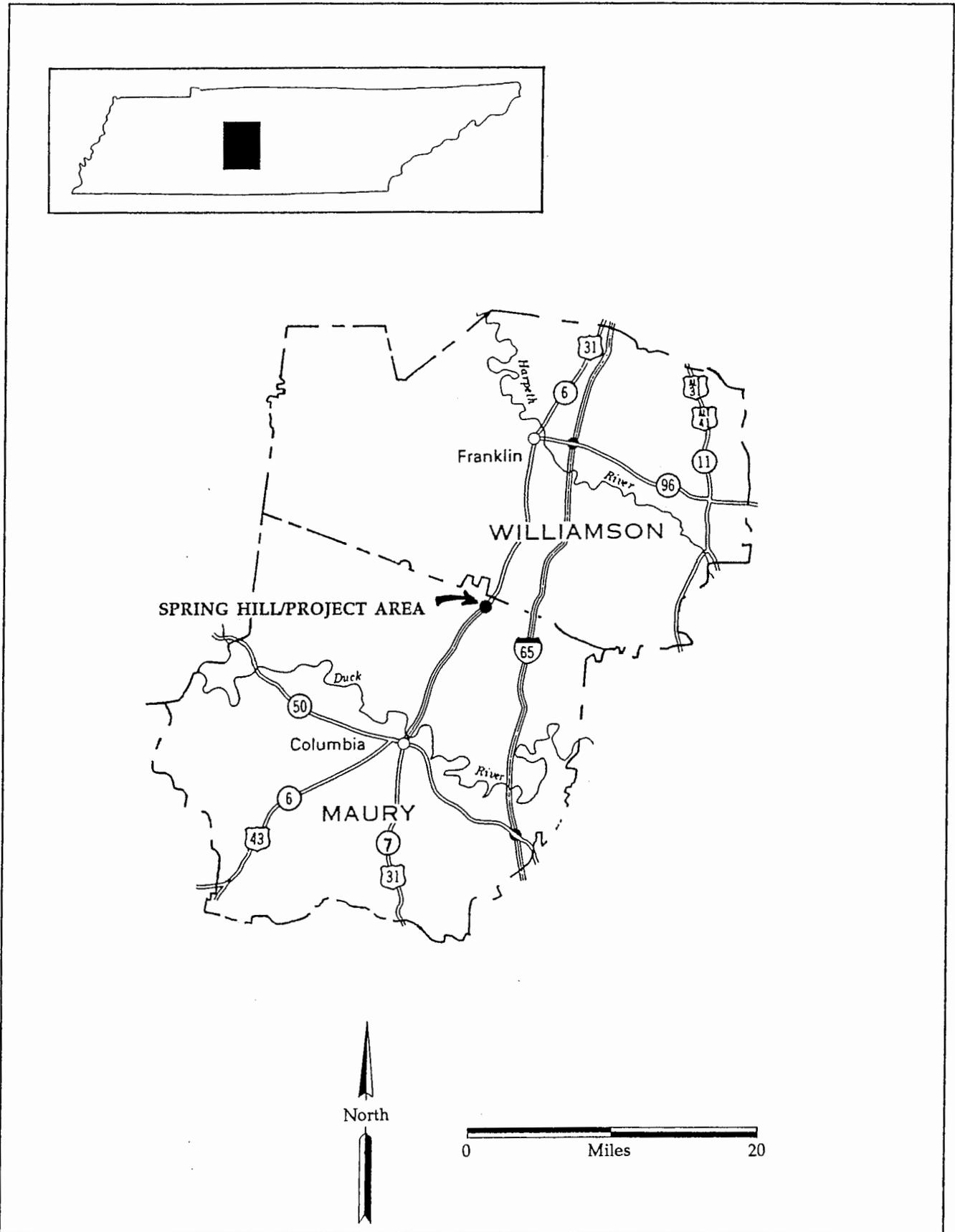


Figure 1. Project Location.

II. NATURAL SETTING

PHYSIOGRAPHY

Spring Hill is situated in the Nashville Basin region of the Interior Low Plateau physiographic province. This region is characterized topographically by a rolling, hilly terrain with isolated hills near the periphery of the basin province (Bentz 1989; Fenneman 1938; Shimer 1972). Elevations in the study area are 680-760 feet (207-233 m) above mean sea level.

The study area lies within the Duck River drainage system. Numerous springs and small streams flow into McCutcheon Creek, providing the drainage system for the battlefield area. McCutcheon Creek flows into Rutherford Creek, approximately 1.8 miles (2.9 km) south of Spring Hill, which in turn flows into the Duck River.

GEOLOGY AND PEDOLOGY

Limestone, high in phosphate content, forms the underlying bedrock in the Spring Hill Battlefield study area (Springer and Elder 1980:9; Edwards et. al. 1974:12-13). Isolated outcroppings of limestone were observed throughout the study area by the field crew. The underlying limestone also contains nodules of chert which was utilized by the prehistoric inhabitants of the region.

The soils encountered in the Spring Hill Battlefield area belong to the Maury-Braxton-Harpeth association. These soils are characterized by deep, well drained deposits overlying permeable, reddish clay subsoils (Springer and Elder 1980:38).

FLORA AND FAUNA

Flora observed in the study area includes agricultural crops, including soybean, hay, and wheat, and numerous different species of deciduous trees. Walnut, maple, and hickory were the principal trees noted during the field investigation. Isolated cedar trees also occur in the area of the Spring Hill Battlefield.

Fauna observed during the fieldwork included white-tailed deer, opossum, raccoon, and rabbit. Birds observed in the study area include the red-tail hawk, turkey vulture, and diverse songbirds.

III. METHODOLOGY

LITERATURE REVIEW

The historical documentation pertaining to the November 29, 1864, battle at Spring Hill was reviewed prior to the fieldwork. This review served to provide the field crew with an overview of the nature of the battle as well as identify the types of military activities in the areas selected for archaeological investigation. Sources consulted during the literature review included the after-battle reports in *The War of the Rebellion: A Compilation of the Official Records of the Union and Confederate Armies* (1971) (hereafter cited as Official Records) and postwar accounts of the battle by Cheatham (1977), Cox (1882), Keesy (1991), Shellenberger (1907), and Young (1908). Secondary accounts that were reviewed included Daniel (1991), Hay (1929), Roth (1984), and Sword (1994). Particular attention was given to identifying references to landforms, streams, roads, structures, and distances; crucial data for determining the location of the key areas of the battlefield selected for archaeological investigation.

Previous cultural resource management projects in the Spring Hill area were also reviewed. These included two archaeological studies within two miles of the project area (Bentz 1989; Kline 1985), one architectural assessment (Carver 1985), and the Spring Hill Battlefield preservation plan prepared for the Association of the Preservation of Civil War Sites (White Star Consulting 1995).

A concerted effort was made to locate maps of the Spring Hill Battlefield. From the review of the Official Records after-battle report, it became apparent that no maps of the battlefield were drawn immediately after the battle. Two of the extant maps (Shellenberger 1907; Young 1908) of the battle are postwar renditions drawn from the recollections of the participants and have been extensively used in nearly all of the secondary accounts. These two maps played an important role during the 1995 archaeological study in determining the locations selected for investigation.

BATTLEFIELD LOCATIONS SELECTED FOR STUDY

Six areas of the Spring Hill Battlefield were selected for archaeological study. Selection of these areas was based on their ability to yield information that would 1) aid in delineating the boundaries of the battlefield, and 2) locate areas of the battlefield where specific military units were positioned and fighting occurred.

The six locations were selected for archaeological examination:

1. Cheairs' cemetery (pivot point for the two wings of the Confederate battle line);

2. Confederate General Johnson's Division Bivouac area north of Rippavilla;
3. Union General Luther Bradley's defensive position south of Spring Hill;
4. Pre-war house site near Bradley's line that burned during the battle;
5. Weaver's Hill (location of Confederate assault on Bradley's line and bivouac area for Confederate General John C. Brown's Division);
6. Pre-war Tollhouse Structure on the Rally Hill Pike.

Specific information on the physical characteristics of each location is presented in Chapter V. Figure 2 depicts the six locations selected for reconnaissance.

EXPECTED ARCHAEOLOGICAL REMAINS

Cultural Material

Certain types of artifacts were expected to be found at the four locations available for archaeological investigation, reflecting the military and civilian activities there. Artifacts reflective of the specific type of military activity were derived from review of Civil War drill manuals, such as *The Artillerist's Manual* (Gibbon 1862) and *Infantry Tactics* (Casey 1862); secondary sources on the tactics and maneuvers used during the war, including Jones (1992) and Griffith (1989); and collections of artifacts from Civil War sites such as Harris (1987) and Legg and Smith (1987). Table 1 presents the historical activities at each location and the types of artifacts that were anticipated. The cemetery investigations were limited to grave shaft delineation and not subsurface examination for military artifacts.

Table 1. Activity and Expected Artifacts per Location.

Location	Activity	Expected Artifacts
Johnson's Bivouac	Temporary encampment	Buttons, personal items, discarded camp equipment, dropped Minie balls
Bradley's Line	Infantry position	Artillery shell fragments, dropped and/or fired Minie balls, percussion caps
Burned House	Possible infantry position, private domicile	Artillery shell fragments, dropped and/or fired Minie balls, percussion caps, table wares, glass wares, personal items
Weaver's Hill	Possible infantry position	Artillery shell fragments, dropped and/or fired Minie balls, percussion caps, discarded camp equipment
Tollhouse	Infantry alignment	Domestic debris dropped and/or fired Minie balls, percussion caps

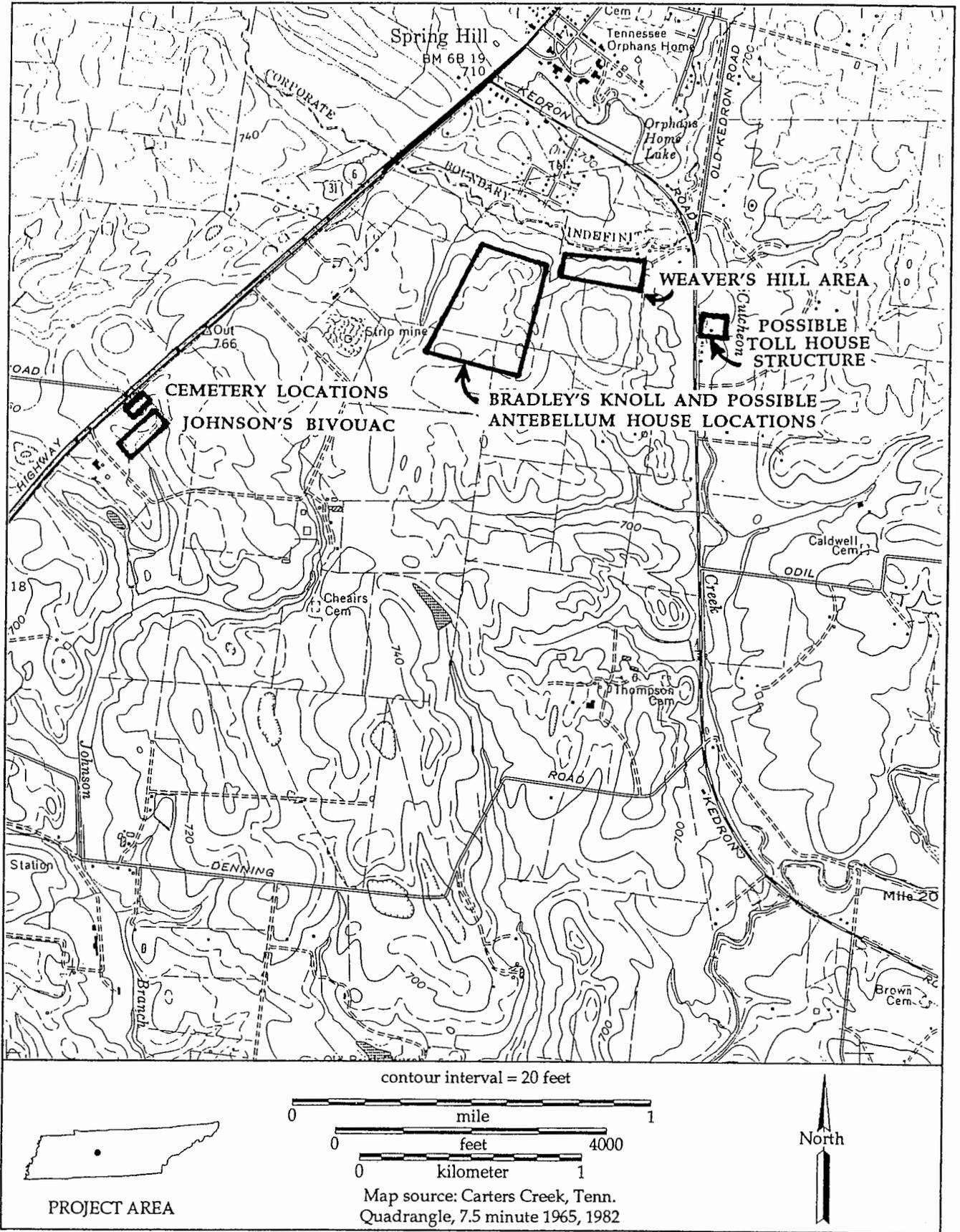


Figure 2. Spring Hill Battlefield Areas Selected for Archaeological Study.

Potential Factors Affecting the Archaeological Record at Spring Hill

Potential sources of bias affecting the results of the archaeological field survey were identified during the field study and the analysis of the recovered data. These sources have implications for the interpretation of the types and frequencies of the artifacts recovered at each location. The first potential source of bias is the nature of the military activities presumed at each location. Consideration must be given to the deployment of the soldiers in the area, the length of time spent at the location, and the type of weaponry used, since these factors will influence the nature of the artifacts left behind. Infantry or cavalry fighting in an open skirmish order will leave a more widely dispersed artifact pattern than that associated with a regular battle line formation. Areas used as temporary bivouac locations would also tend to leave a widely dispersed artifact pattern that would consist largely of items accidentally lost or intentionally discarded by the soldiers.

The length of time spent by a body of soldiers will influence the amount of artifacts left behind. In general, skirmish-line engagements tend to be highly mobile affairs, and this type of fighting would limit the amount of materials left behind at any particular location. The fighting between the Federals under the command of Brigadier General Luther Bradley and the Confederates of Major General Patrick Cleburne's Division lasted approximately ten minutes, which would limit the amount and type of artifacts that could potentially be found at the area. The type of weaponry used in a particular area will also influence the materials deposited in the archaeological record. This is particularly true for artillery positions without any accompanying earthworks, as the materials left behind would consist predominantly of friction primers and pins widely distributed across the battery location.

The limited nature of the archaeological field survey is a second source of bias. Only a small portion of each area was examined in the time allotted for the field study, limiting the sample size. Transects were non-randomly placed at each area, based on interpretations of the historical literature. Both the small sample size and the methods used to position the transects have implications for the amounts, types, and interpretations of the recovered artifacts.

Postwar civilian activities on Civil War battlefields may also bias the results of archaeological studies. As one means of obtaining money both during and after the war, civilians would often systematically recover musket balls from battlefield areas and melt the lead down for resale. This was particularly common practice around Atlanta after 1864, where the civilian population would refer to the miles of abandoned entrenchments circling the city as the "lead mines" (Kennett 1995). It is not known if this activity was conducted by the citizens of Spring Hill in the postbellum period. However, the active scavenging and recycling of military items by civilians immediately after the war would have implications for the identification and interpretation of Civil War sites.

Finally, metal detecting at the sites prior to the 1995 study may also bias the results of the Spring Hill study. The removal of artifacts by relic hunters from the Spring Hill area has direct impact on the interpretation of the archaeological materials remaining on the battlefield areas. As a result, it is necessary to bear in mind these potential sources of bias when interpreting the results of archaeological studies on Civil War military sites.

FIELD METHODS

Metal Detector Survey

The Spring Hill archaeological field survey made extensive use of two metal detectors at each location. A systematic sweep of each site was conducted using a Coin Master® metal detector to locate metallic objects and any directly associated items that may reflect the military occupation of the site. All positive metal detector readings were flagged and numbered sequentially. After the metal detector sweep, photographs of the area were taken, showing the spatial distribution of the positive readings. Each flagged location was also plotted on site maps drawn for each of the six areas. A shovel test pit was dug at each flag to recover the metal object. All excavated soil was screened through 0.25 inch mesh hardware cloth to ensure uniform recovery of cultural materials. Information for each shovel test was recorded in the field journal and included detailed descriptions of the stratigraphy, standard Munsell color identifications, and the material culture encountered.

Transects were established at each location using a Brunton™ Pocket Transit. The number and length of the transects varied with the size of the area being examined. The width of each transect, approximately 8.0 feet, was based on the amount of surface area that could be covered on each pass by the metal detector. The location and orientation of each transect were recorded in the field journal and marked on the base map for each location.

The premise underlying the use of the metal detector was that the majority of items used by the Confederate or Federal forces engaged at Spring Hill would be metal, including items such as bullets, artillery friction primer pins, shell fragments, camp equipment, bayonet scabbard tips, and uniform buttons. This premise is supported by the Civil War artifacts collected from the Spring Hill Battlefield by relic hunters, which include intact artillery shells and Minie balls. Metal detectors have been successfully used on military sites such as the Little Big Horn National Battlefield Park, Montana (Fox and Scott 1991; Scott and Fox 1987); the Federal quartermaster's depot at Camp Nelson, Kentucky (McBride 1994:130-157; McBride and Sharp 1991); and the Mine Creek battlefield, Kansas (Lees 1994:39-59).

Cemetery Investigation

One objective of the Spring Hill survey was to determine the existence and location of a slave cemetery. If located, it would provide information concerning the placement of the Confederate line. After combining several historical maps with USGS topographic quadrangles, the crew determined the most probable location for the burials. Maps by Shellenberger, Hay, and the National Park Service placed the cemetery in three different locations. The Cheairs' House, or Rippavilla, and Oak Lawn, the only two constant landmarks on all three maps, were used as points for triangulation, which yielded three possible sites for the cemetery. Two of these locations could be discounted immediately, as one area had been destroyed by the construction of Saturn Parkway and the other was located on property that was inaccessible for the purposes of archaeological survey. The third area, derived from Shellenberger's 1907 account, placed the cemetery on a knoll northeast of Rippavilla, where it formed the angle of the Confederate line. Upon visual inspection, it was determined that this locale was the least disturbed and most accessible of the three; therefore, it was tested.

Several factors indicated that the triangulated location based on Shellenberger's map was likely. For example, according to historical documentation, the slave quarters related to the burials were located only a few hundred feet to the southeast, a reasonable distance to expect between the two sites (Shellenberger 1907). The distance between the possible cemetery location and Rippavilla was great enough that the cemetery probably would not have been visible from the house, another expected feature of slave burials. Finally, evidence of an old farm road could be seen along the northern edge of the field, extending east from U.S. Highway 31, then angling southeast along a ridge toward the possible slave quarters site area. This road formed a mode of transportation between the two sites.

A steel probe three feet in length and one-half inch in diameter was used to determine the presence of graves. At that length, the tool is legally considered non-intrusive to the actual contents of the burial, as it penetrates only the grave shaft. The use of a probe, therefore, does not require burial excavation or removal permits, because no excavation is involved. Instead, the probe tests for soil density. That is to say, the soil matrix in a previously excavated area, such as the shaft of a grave, will be much less dense than the matrix of an unexcavated area, resulting in a positive probe test.

A probe can be used to determine all four sides of each grave. In some cases, it can determine the width of the burial platform, depending on the depth of the burial (Figure 3). Historically, graves were excavated at a larger width than the coffin until the desired depth was reached. Commonly, this depth is referred to as the grave platform. When the platform was reached, the remaining excavations consisted only of the depth and width of the coffin, creating a hole large enough for the box. The accuracy rating of such testing is professionally regarded as approximately

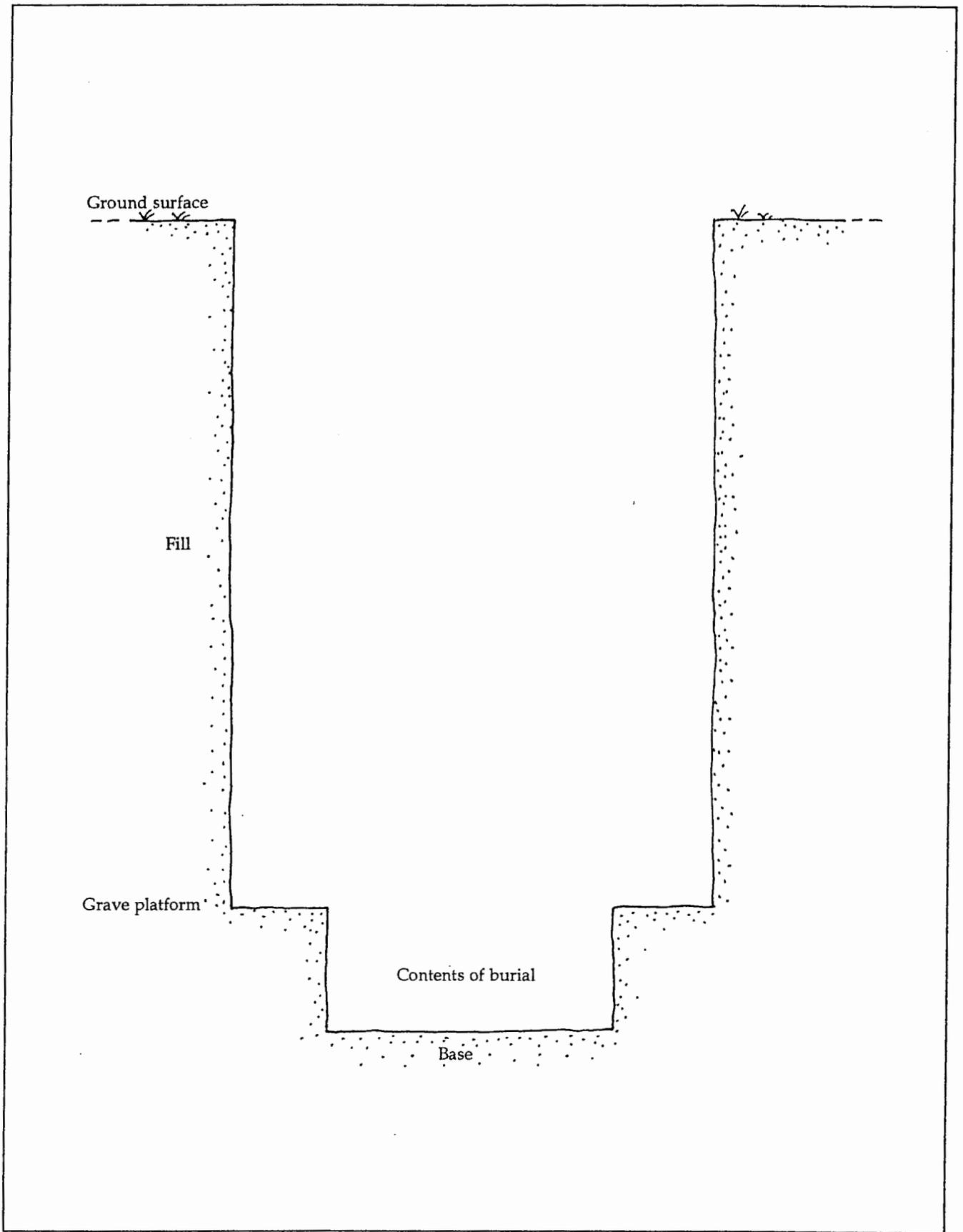


Figure 3. Schematic Cross-section of a Typical Grave Shaft.

90-95 percent, making this a viable alternative to more intrusive or destructive methods, such as mechanically removing the topsoil or general excavation of an area likely to contain graves. For the Spring Hill project, the possible cemetery location was probed systematically in three foot transects, with tests approximately every foot. Setting transects at three foot intervals ensured that the area was covered adequately on the long axis of any possible graves and that sub-adults would not be excluded. In addition, testing every foot along these transects guarded against "skipping over" graves that were more narrow in width. These transects were aligned along a north-south axis to ensure the greatest probability for encountering graves, as Christian burials are oriented with the head to the west and the feet to the east. By aligning transects in such a manner, graves would be intersected at a point perpendicular to the long axis, allowing a higher probability for discovery than a transect intersection on the smaller east-west axis.

In the event of positive tests, the area is flagged and examined at much smaller intervals to determine if a grave is present. Boundaries of each suspected grave are marked with pin flags initially, then re-marked with iron spikes in each corner and wrapped in flagging tape. Next, each burial is assigned a feature number and measured for length and width, as well as relative distance to associated burials and rows. Finally, the entire testing area was measured, and all measurements were transferred to a scale map indicating the probe area and location of each burial or anomaly.

LABORATORY METHODS

The materials recovered during the fieldwork were processed and prepared for curation at the Garrow & Associates, Inc., facility in Atlanta. Artifacts were cleaned before analysis using techniques appropriate to their nature and condition. Artifacts made from durable materials, such as pottery and glass, were cleaned with water and a soft brush. Metal fragments were dry-brushed to remove any encrusted dirt and then cleaned and stabilized by electrolysis.

Before the artifacts were identified, each object was labeled with the state site number and an accession number that provided the provenience data. The material and function of all items were identified, where possible. Table 2 presents the reference works used in the identification of the historic military artifacts. The full bibliographic citation for each reference listed in Table 2 is found in the References Cited at the end of this report.

CURATION

All cultural materials, photographs, maps, and field notes from the Spring Hill Battlefield study have been prepared for curation and will be turned over to the Spring Hill Battlefield Preservation Council for permanent curation. It is recommended that the Spring Hill Battlefield Preservation Council arrange to have the materials temporarily curated at Rippavilla until a permanent repository for the materials can be designated.

Table 2. Reference Works Used in the Identification of Recovered Materials.

Author(s)	Year	Subjects
Coates and Thomas	1990	Bullets, percussion caps, and small arms parts
Garavaglia and Worman	1984	Firearms and small arms parts
Dickey and George	1993	Artillery shells, friction primers, and fuses
Edwards	1962	Small arms parts
Laidley	1861	Musket parts, bullets, percussion caps, and transport boxes
Ripley	1970	Artillery shells, friction primers, and fuses
Thomas	1981	Bullets and cartridges
Thomas	1985	Artillery shells, friction primers, and fuses
Todd	1978	Military accoutrements, weaponry, and camp equipment
Woodhead	1991a	Military accoutrements, weaponry, and camp equipment of the Federal armies
Woodhead	1991b	Military accoutrements, weaponry, and camp equipment of the Confederate armies

IV. HISTORICAL CONTEXT

On November 29, 1864, two divisions of General Benjamin Cheatham's Corps of the Confederate Army of Tennessee engaged elements of the Second Division, Fourth Army Corps at Spring Hill, Tennessee. Controversy has surrounded the Battle of Spring Hill, also referred to as the "Affair at Spring Hill" (Roth 1984:12), owing in part to the general lack of documentation on the battle by many of its participants. Many of the Confederate officers who played key roles in the fighting at Spring Hill, most notably Major General Patrick Cleburne and Brigadier General Hiram B. Granbury, were killed the following day at the Battle of Franklin without leaving an after-battle report. Similarly, many of the company and field grade officers in Cleburne's Division were killed on November 30, 1864, at Franklin, which contributed to the absence of company and regimental accounts of the Spring Hill battle. This is reflected in the accounts found in the Official Records, where only seven of the 39 after-battle reports pertaining to the November 29, 1864, engagement at Spring Hill were written by Confederate officers.

A larger body of primary information exists in the Official Records for the Federal infantry and artillery engaged in the fighting at Spring Hill. However, despite being written within two weeks of the battle, most of the reports provide only cursory details on the specific movements and positions of the regiments involved. Notable exceptions are the reports of Brigadier General Luther P. Bradley, Major Frederick A. Atwater, and Lieutenant Colonel Robert C. Brown, which include relatively detailed accounts of the nature of the fighting and the topography.

Postwar accounts of the Spring Hill engagement relied more heavily on the memories of the participants than on primary documentation. Many of these accounts are written from the recollections of non-commissioned officers and common infantrymen. Although they are useful, it must be remembered that these accounts present only a narrow perspective of the battle as seen from the individual in the ranks, which would be different from that of an officer.

As a result, the lack of a substantial body of primary information on the Battle of Spring Hill has contributed to several different interpretations of the locations of military activities. The following historical summary is not intended as the definitive statement on the Battle of Spring Hill, but rather as an overview of the actions there on November 29, 1864.

PRELUDE TO SPRING HILL: HOOD'S 1864 INVASION OF TENNESSEE

The fighting at Spring Hill is the direct result of the strategy developed by Confederate General John Bell Hood, commanding the Army of Tennessee, to reverse the Confederate setbacks after the capture of Atlanta and the defeat of Confederate naval forces at Mobile Bay in 1864. Following the capture of Atlanta on

September 2, 1864, Hood proposed to the Confederate War Department a plan to take the war into Tennessee to disrupt Federal supply and communications lines connecting the armies of Major General William T. Sherman with his supply base in Nashville and Chattanooga. The fighting for Atlanta had depleted the manpower of the Army of Tennessee, making it impossible for Hood to successfully engage Sherman's armies in a full-scale confrontation. However, the Army of Tennessee could inflict serious damage to Sherman's supply line, the vital Western & Atlantic Railroad running between Chattanooga and Atlanta (Roth 1984:21; Sword 1994:46; White Star Consulting 1995:2-3). This, Hood hoped, would in turn force Sherman to abandon Atlanta and return to Tennessee.

Initially, Hood's plan achieved a modicum of success. Sherman, with the bulk of his force, began to pursue the Confederates into northern Georgia. Through a series of maneuvers, the Army of Tennessee avoided being drawn into a full-scale pitched battle with Sherman's forces. Unable to catch the elusive Hood, Sherman completed preparations for his original plan to "smash Georgia to pieces" (Sword 1994:61). Leaving the defense of Tennessee to Major General George H. Thomas and the Fourth and Twenty-third Army Corps, Sherman prepared to march the remainder of his army to the Atlantic coast.

Having failed to force Sherman out of Georgia, Hood decided to continue his offensive and invade Middle Tennessee. After crossing the Tennessee River at Tuscumbia, Alabama, the Army of Tennessee marched toward Pulaski, Tennessee, where Major General John M. Schofield and his force of approximately 30,000 men of the Fourth and Twenty-third Army Corps were encamped. Hood's plan of action called for interposing the Army of Tennessee, numbering roughly 38,000 men, between Schofield's command and the 30,000 men of the Nashville garrison. If successful, Hood could engage the enemy on relatively equal terms (Sword 1994:87-98; White Star Consulting 1995:3-4).

Hood's initial maneuvers forced Schofield and his command to abandon Pulaski and retreat northward to Columbia, Tennessee, situated along the Duck River (Cox 1882). The Confederate cavalry, under the command of Major General Nathan Bedford Forrest, forced the Federal cavalry, commanded by Major General James H. Wilson, toward Nashville, effectively separating Schofield from his cavalry support. The Army of Tennessee arrived in front of Columbia on November 27, 1864. Having failed to capture Columbia before the Federals, Hood made plans to interpose his army between Schofield and the Nashville garrison at Spring Hill, approximately 12 miles north of Columbia.

THE BATTLE OF SPRING HILL

On the morning of November 29, 1864, Hood crossed the Duck River four miles east of Columbia with Cheatham's Corps and Stewart's Corps. Leaving two divisions of Lieutenant General Stephen D. Lee's Corps in front of the Federals at Columbia as a

diversion, Hood moved his column towards Spring Hill along the Davis Ford Road. From captured maps used by Hood to plan his movement, the Davis Ford Road appeared to offer the most direct route to conduct a rapid flanking movement, enabling the Confederate army to reach Spring Hill and cut the Columbia-Franklin Pike. According to Hood's map, Spring Hill was only 12 miles from the Duck River using the Davis Ford Road; however, local guides, found after the march had begun, informed Hood that the Davis Ford Road was actually five miles longer than shown on the map due to numerous bends and twists in the road. Furthermore, it was badly rutted and, given its poor condition, had been abandoned in places by the local inhabitants as early as 1860 (Roth 1984:22; Sword 1994:114-115; White Star Consulting 1995:4). As a result, the lead elements of the Confederate column would reach Spring Hill far later than originally planned.

Alerted to the Confederate crossing of the Duck River the same day, Major General John M. Schofield contacted General Thomas in Nashville and received orders to withdraw to Franklin, Tennessee, and prevent the enemy from crossing the Harpeth River. Schofield immediately began to move his massive wagon train and most of his artillery northward along the Columbia-Franklin Pike. Major General David S. Stanley, commanding the Fourth Army Corps, was given the responsibility of protecting the wagon trains (Schofield 1971:341-42). Taking the First and Second divisions of the Fourth Army Corps, Stanley began to move towards Spring Hill. The First Division was positioned between the Duck River and Rutherford Creek to prevent any attempts by the Confederates to attack the rear of the Federal wagon train, remaining there until the evening of November 29, 1864. By 11:30 A.M., Stanley and the Second Division were nearing Spring Hill when a cavalryman reported that Confederate cavalry was approaching the town from the direction of the Rally Hill Pike (Stanley 1971:113).

The Confederate cavalry under Major General Forrest left Columbia on November 28, 1864, in advance of the main infantry column. Having accomplished his primary objective of keeping the Federal cavalry separated from Schofield's infantry, Forrest turned his command toward the Columbia-Franklin Pike. Two miles from Spring Hill, Forrest's troopers encountered pickets of Lieutenant Colonel Charles C. Hoefling's 12th Tennessee Cavalry (Federal), and heavy skirmishing soon developed (Forrest 1971:753; Sword 1994:118-119). Reinforced by the 3rd Illinois Cavalry, 2nd Michigan Cavalry, and two companies of Indiana cavalry, Hoefling's command at first withstood the Confederate assault but was eventually forced to conduct a gradual withdrawal toward Spring Hill (Sword 1994:119).

The arrival of the Federal wagon train and artillery at Spring Hill created tremendous confusion, as both wagons and infantry escorts began to clog the narrow streets of the community. A wagon park was being established northwest of Spring Hill near the railroad depot by the time the Confederate cavalry pushed Hoefling's skirmishers to the eastern edge of the town.

Sensing the danger to the wagon park, General Stanley immediately began to deploy the infantry of the Second Division, commanded by Brigadier General George D. Wagner, to prevent Forrest and his cavalry from seizing the Federal wagons and artillery (Stanley 1971:113; Wagner 1971:229-230). Wagner's division consisted of three brigades commanded by Colonel Emerson Opdycke, Colonel John Q. Lane, and Brigadier General Luther P. Bradley. Opdycke's brigade, being in the advance, was ordered to deploy north of Spring Hill while covering as much ground as possible, while Lane's brigade was deployed on the eastern edge of the town (Lane 1971:255; Opdycke 1971:239; Stanley 1971:113; Wagner 1971:229-230).

Bradley's Third Brigade had been delayed during the march in order to allow several artillery batteries to pass on the pike and was the last brigade of Wagner's division to arrive at Spring Hill at approximately 2:00 P.M. To protect the right flank of Lane's brigade, General Stanley ordered Bradley "to occupy a wooded knoll about three-quarters of a mile east of the pike, and which commanded the approaches from that direction" (Stanley 1971:113). From the knoll, the Federals would be able to protect the Columbia-Franklin Pike and support the right flank of Lane's brigade, even though it was physically separated from Lane's position (Figure 4).

The Third Brigade, under Bradley's command, was composed of the 42nd, 51st, and 79th Illinois Volunteer Infantry, the 15th Missouri Volunteer Infantry, and the 64th and 65th Ohio Volunteer Infantry regiments, totaling approximately 2,000 men. Most of the infantrymen were veterans, having served through the Atlanta and other actions. However, the 42nd Illinois contained 350 new recruits "who had no drill at all and never were under fire" (Atwater 1971:275), a situation that was to have serious consequences for the defense of Bradley's knoll.

Bradley quickly advanced his brigade to the knoll and immediately began to construct light barricades of fence rails and logs. Placing the 42nd Illinois in reserve, Bradley deployed the entire complement of the 64th Ohio as skirmishers. The remainder of the brigade was deployed behind the barricade, facing east. The remaining four regiments were posted with the 79th Illinois anchoring the left of the line followed in order by the 51st Illinois, 15th Missouri, and the 65th Ohio (Bradley 1971:268).

As the men of the 64th Ohio left the wooded knoll and advanced eastward toward the Rally Hill Pike they crossed over a springwater stream and passed an open field planted with corn and cotton (Keesy 1991). The skirmish line was able to advance beyond the Rally Hill Pike to the house owned by Dr. Peters, a prominent physician, before encountering heavy opposition from the Confederates (Brown 1971:283; Keesy 1991). Threatened on both flanks, the 64th Ohio conducted an orderly withdrawal to within supporting distance of Bradley's main line. The combined fire from the entrenched Federals on the knoll and the skirmishers effectively halted the Confederate attack (Bradley 1971:268; Brown 1971:283). Out of ammunition, the 64th Ohio was withdrawn behind the barricade and resupplied.

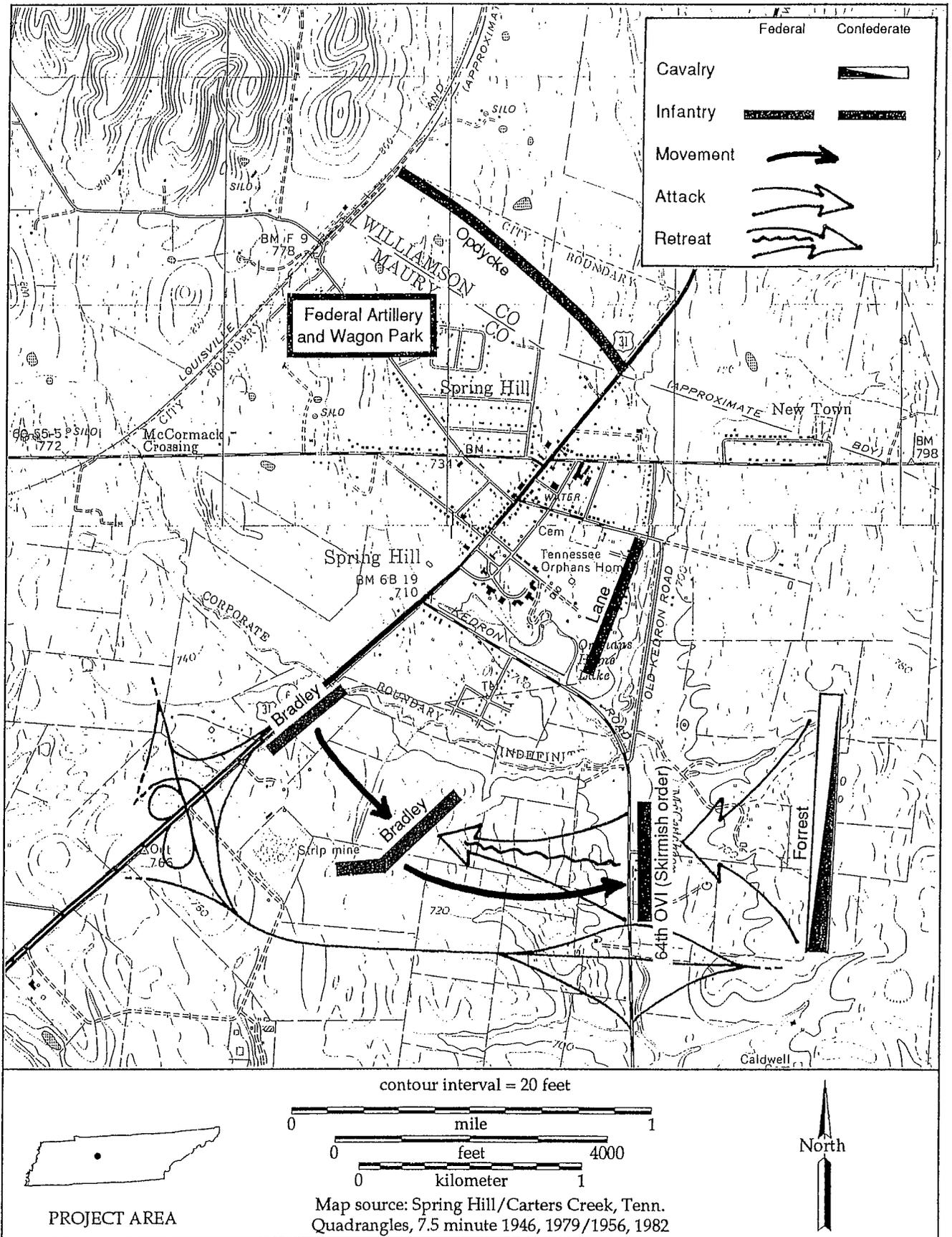


Figure 4. Federal Positions South of Spring Hill at approximately 2:00 pm.

The men of the 64th Ohio believed that they had been attacked by Confederate infantry supported by cavalry on the flanks (Brown 1971:283, Keesy 1991); however, Cleburne's Division, the only Confederate infantry nearby, was beginning to arrive on the field at the time that the 64th was driven back to Bradley's knoll. The enemy force that had forced the Federals to retire consisted of dismounted cavalry from Brigadier General James R. Chalmers' Division of Forrest's command. Forrest, believing that only dismounted Federal cavalry were posted in the wooded knoll, ordered Chalmers to charge the enemy and drive them from the position. Chalmers protested, stating that a large body of infantry supported by artillery, not dismounted cavalry, was positioned on the knoll. Overriding Chalmers' protest, Forrest ordered the charge, still believing that only a small body of enemy cavalry lay ahead. The Confederate horsemen approached the edge of the woods only to be met with intense musket fire from Bradley's infantry, while Federal artillery, positioned on a ridge northwest of the knoll, opened fire (Marshall 1971:331). Immediately forced to retreat, the Confederates returned to their earlier positions along the Rally Hill Pike. When Chalmers came to make his report, Forrest is reputed to have said, "They was in there sure enough, wasn't they, Chalmers" (Young 1908:31).

Bradley learned from his skirmishers that a large body of Confederate infantry was seen forming to the front and right of his position. Concerned with protecting his right flank, Bradley deployed the 42nd Illinois, supported by the resupplied 64th Ohio, approximately 150 yards from the right of the main line. The 42nd was positioned at a 45 degree angle, refusing Bradley's line (Atwater 1971:275; Bradley 1971:268; Brown 1971:283).

The Confederate infantry seen by the 64th Ohio belonged to Major General Patrick Cleburne's Division of Cheatham's Corps. Cleburne had been ordered by General Hood to form his division on the Rally Hill Pike south of the tollhouse, march west to the Columbia-Franklin Pike, and seize the road (Roth 1984:23; Sword 1994:126; White Star Consulting 1995:7). Cleburne's Division reached the area near the tollhouse at approximately 4:00 P.M. and began to form for the advance. In accordance with Hood's instructions, Cleburne deployed his three brigades *en echelon* (staggered formation), which would enable the Confederates to quickly wheel to the south after reaching the Columbia-Franklin Pike, effectively blocking the road (Sword 1994:126). The brigades were positioned with Brigadier General Mark P. Lowrey's Brigade forming the right flank, Brigadier General Daniel C. Govan's Brigade in the center, and the brigade of Brigadier General Hiram B. Granbury forming the left flank. Dismounted cavalry under the command of Colonel Tyree H. Bell supported Cleburne's right flank.

At approximately 4:30 P.M., Cleburne's Division began its advance to the Columbia-Franklin Pike (Figure 5). Encountering only light opposition from Federal skirmishers, the men of Lowrey's Brigade unknowingly marched directly

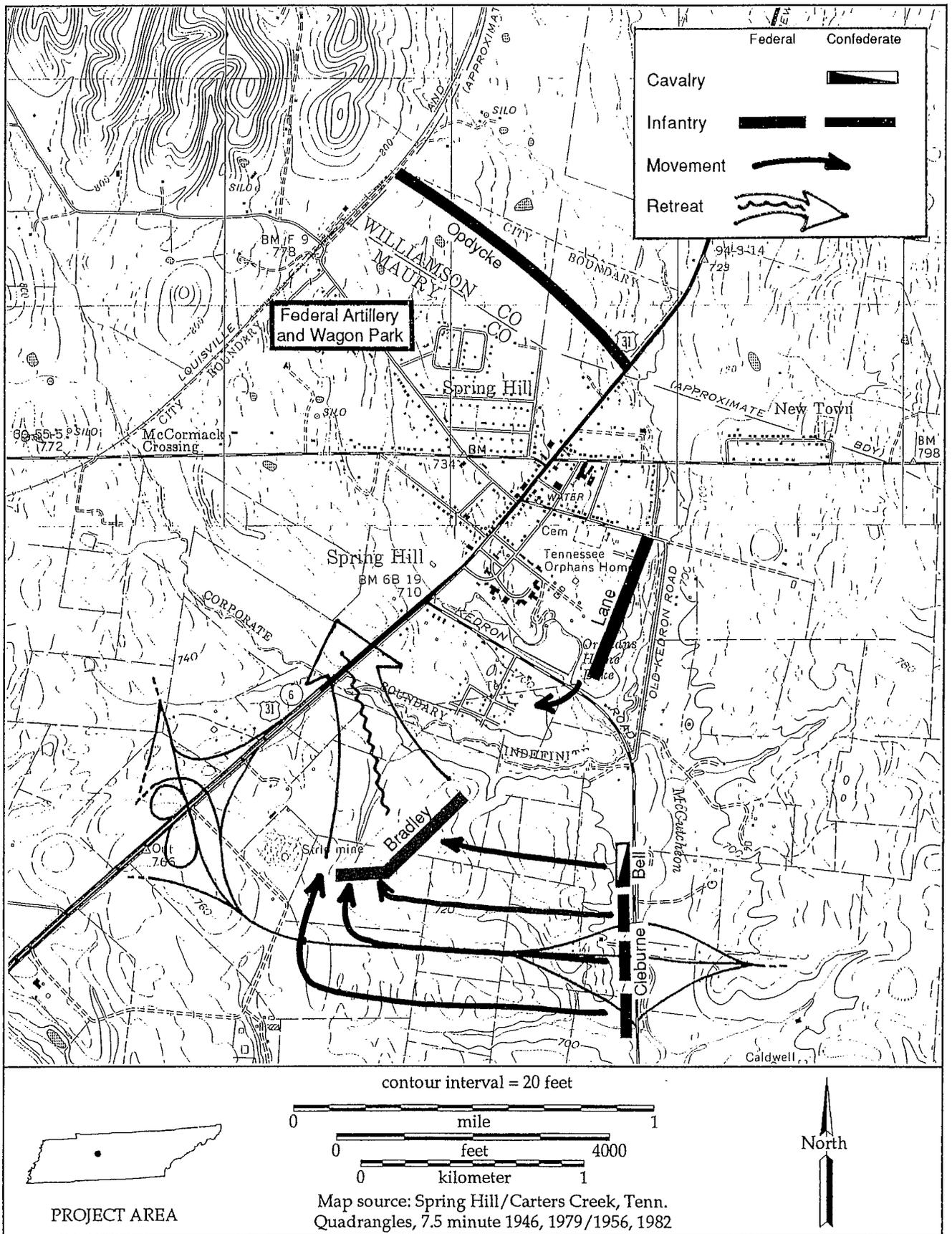


Figure 5. Cleburne's Advance on Bradley's Position, 4:30 pm.

perpendicular to the position held by the 42nd Illinois. The 42nd Illinois and 64th Ohio poured an enfilading volley into the unsuspecting Confederates, causing momentary confusion (Atwater 1971:275; Bradley 1971:268; Brown 1971:283; Sword 1994:127). Quickly responding to the new threat, Lowry and Govan wheeled their brigades to the right and charged the Federal position (Sword 1994:128; Young 1908:31). This maneuver also allowed the Confederate line to overlap the Federal line, contributing to the collapse of the Federal defense. The untrained recruits of the 42nd Illinois could not withstand the assault of Cleburne's veteran infantry, and the right flank of Bradley's line began to crumble. The retreat of the 42nd Illinois created a domino effect for the rest of the brigade, as each regiment in succession began to abandon their position on the knoll (Atwater 1971:275; Bradley 1971:269; Brown 1971:283; Buckner 1971:279; Hay 1929; Keesy 1991; Smith 1971:285; Sword 1994:128-129; Young 1908:31).

The struggle for General Bradley's position lasted approximately 10 minutes (Bradley 1971:269). During the fighting, Bradley was wounded in the left arm and command of the brigade was transferred to Colonel Joseph Conrad (Conrad 1971:269). Cleburne's men continued to pursue the fleeing Federals toward Spring Hill. Prior to the assault on Bradley's position, Captain Lyman Bridges, Chief of Artillery for the Fourth Division, had positioned 18 pieces of artillery on a ridge south of Spring Hill that commanded the Columbia-Franklin Pike and could support Bradley's brigade (Bridges 1971:319; Canby 1971:338; Marshall 1971:331; Scovill 1971:330; Ziegler 1971:336). The intense fire from these artillery pieces halted the Confederate pursuit and prevented a potential rout of the Federal forces at Spring Hill.

Seeing that Bradley's command was about to be overrun, General Wagner ordered Colonel John Q. Lane to quickly move his men to the west and form a new defensive line facing south toward Cleburne's Division. Rapidly moving into position, Lane's men quickly formed a new battle line. However, the artillery barrage had halted the Confederates and, apart from constant firing by the pickets, no further assaults were made by either army. This essentially ended the November 29, 1864, battle at Spring Hill.

Cleburne withdrew his division to the position formerly occupied by Bradley's men and requested further instructions from General Cheatham. Cheatham planned a more concerted assault against the Federals using his entire corps; however, due to confusion caused by conflicting orders from Hood and the approach of darkness, the assault never occurred. The Confederate army rested on the field (Figure 6), fully expecting to complete the destruction of the Federal army the following morning. Throughout the night, the remainder of Schofield's army quietly passed northward along the Columbia-Franklin Pike through Spring Hill to Franklin, Tennessee.

At dawn on November 30, 1864 General Hood discovered that, although he had possession of the field, Schofield's army had slipped by him in the night thus avoiding destruction. Quickly pushing the Army of Tennessee towards Franklin,

Hood ordered the disastrous frontal assault on the entrenched Federals, during the Battle of Franklin, that accomplished little.

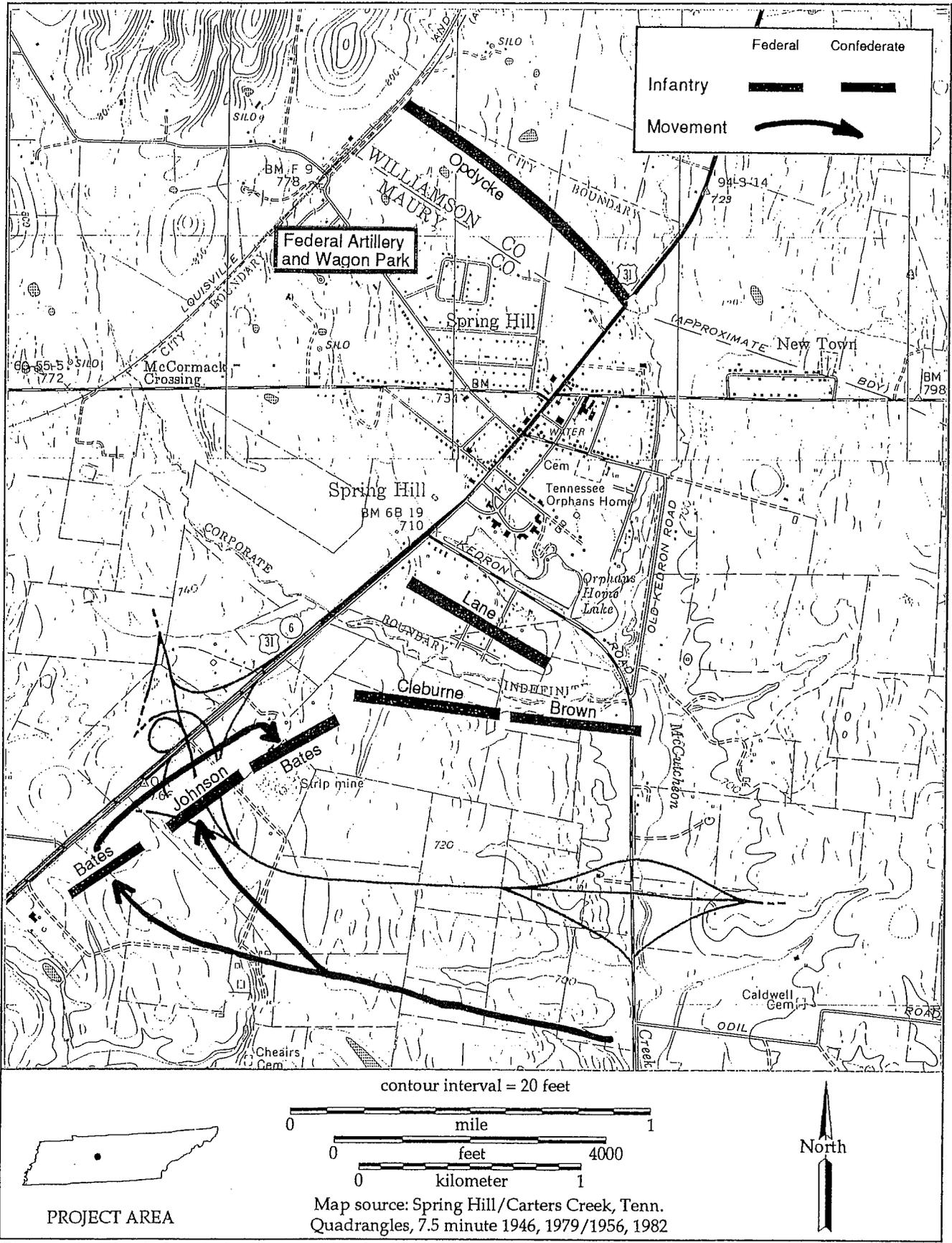


Figure 6. Final Confederate and Federal Positions, 10:00 pm.

V. RESULTS OF ARCHAEOLOGICAL STUDY

JOHNSON'S BIVOUAC LOCATION

On the evening of November 29, 1864, General Johnson's Division of Stewart's Corps moved to within 150 yards of the Columbia-Franklin Pike north of Rippavilla and established a temporary bivouac. Johnson's bivouac, as determined from the historical literature, was positioned approximately 200 yards (182.8 m) northeast of Rippavilla and 150 yards (137.2 m) east of the original roadbed of the Columbia-Franklin Pike (Figure 7). The bivouac area is situated in a small valley bounded on the north and northeast by prominent ridges (Figure 8) and encompasses approximately 13.6 acres (5.5 hectares). The area is currently used for hay cultivation. Two small springs in the bivouac area drain into the Johnson Branch of Rutherford Creek.

According to Shellenberger (1907), the location of Johnson's bivouac was shown to him by Major Nathaniel Cheairs more than 45 years after the end of the war. Cheairs remembered the location being marked by a line of temporary barricades made from fence rails and numerous firepits that were visible immediately after the war. An unmarked cemetery on the Cheairs estate, situated northeast of Rippavilla, was also indicated by Cheairs as being within the Confederate lines. It is important to note that Major Cheairs did not participate in the Battle of Spring Hill, and his placement of the Confederate line was based on the interpretation of physical remains thought to represent the Confederate position.

As noted in Chapter III, the activity on a given battlefield location and the length of time spent in the area by the soldiers has a profound effect on the amount and type of materials deposited as part of the archaeological record. Johnson's Division was encamped on the ground from approximately 9:00 P.M. on November 29, 1864, until 4:00 A.M. the following day, a total of only seven hours. During this time, temporary breastworks were constructed from the rail fences around Rippavilla and the nearby fields, and a number of small campfires built. Of these, only the campfires would potentially leave archaeological traces of features associated with the brief occupation of the area by the Confederates. Material culture left behind would consist primarily of items accidentally lost, such as buttons, ammunition, and small personal items, along with discarded materials captured from the Federal troops moving along the Columbia-Franklin Pike. As only sporadic firing occurred between the Federals and the Confederate pickets posted near the pike, large concentrations of fired and dropped small arms ammunition would not be expected to be found in the area. As a result, large amounts of military artifacts attributable to Johnson's occupation were not expected.

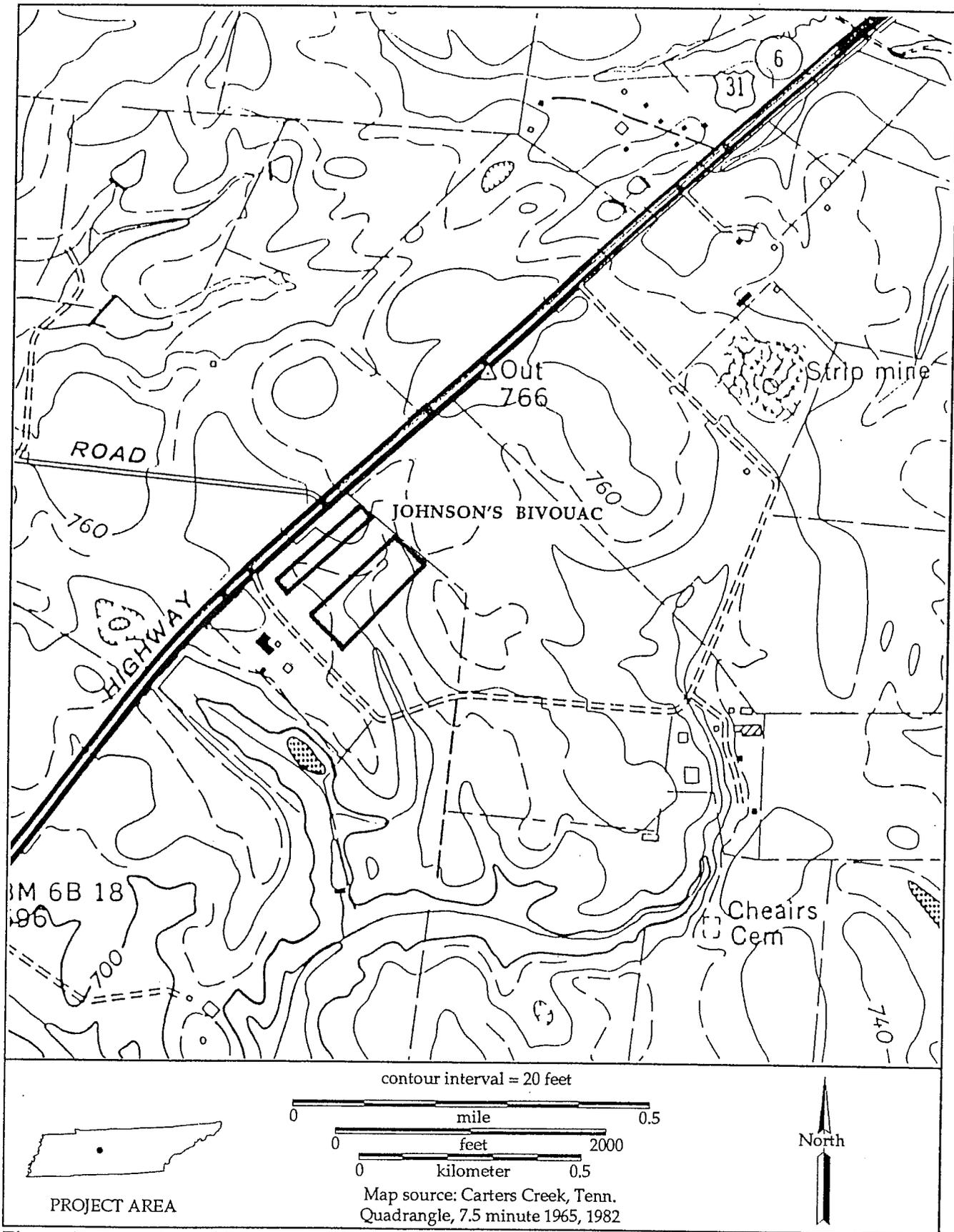


Figure 7. Location of Johnson's Division Bivouac, November 29, 1864.



Figure 8. View of Location of Johnson's Bivouac, Looking North.

With the preceding in mind, a series of seven transects, oriented parallel to the Columbia-Franklin Pike, were established across the area in two groups (Figure 9). The northern end of Transect 1 was positioned 115 feet (35.0 m) east of the U.S. Route 31 right-of-way; Transects 2 and 3 situated 31 feet (9.1 m) and 15 feet (4.6 m) farther to the east respectively. Each transect was approximately 750 feet (228.6 m) in length, terminating southwest of the smaller springhead. The placement of Transects 1-3 was based on the relationship of the Confederate line to the cemetery per Major Cheairs' recollection of the bivouac area. The transects were examined sequentially. No positive readings were recorded along Transects 1-3.

The second group of transects (Transects 4-7) was established 600 feet (183 m) southeast of the U.S. Route 31 right-of-way (see Figure 9). The southern end of each transect was positioned 50 feet (15.2 m) northeast of the Rippavilla access road. An interval of 10 feet (3.05 m) was used between the transects. Each of the transects was oriented southwest-northeast, paralleling the Columbia-Franklin Pike, with a length of approximately 900 feet (274.32 m). Examination began with Transect 6, followed by Transects 4 and 7, to prevent possible electrical interference between the two metal detectors. Transect 5 was established but not investigated in order to provide the field crew more time to investigate the area of Bradley's Line.

A total of 18 positive readings was recorded for three transects. Investigation of Transect 4 produced nine positive readings, while four positive readings were recorded for Transect 6 and five positive readings for Transect 7. Only eight of the positive readings contained artifacts; the remaining readings were attributable to tin foil fragments immediately below the humus level and mineral concentrations in the soil. Table 2 presents the artifacts recovered from Johnson's Bivouac area.

None of the materials recovered during the archaeological investigation of the area is attributable to Civil War military activities. All of the artifacts identified as to activity are remnants of agricultural materials (Figure 10). Of these items, the barbed wire/fence wire fragment provided a *terminus post quem* (date after which the artifact could have been deposited in the archaeological record) of 1877 (Clifton 1970:32). Two of the horseshoes appear to be factory-made blanks that were subsequently finished by a local blacksmith (Figure 11). Throughout the nineteenth century, factory-produced iron implements, particularly agricultural items, replaced locally hand-forged objects (Lasansky 1980:13; McBride 1987:87). A factory-made unfinished horseshoe, similar in configuration to the horseshoe recovered from Transect 1, Reading 5, is illustrated in the 1895 Montgomery Ward and Company catalog (Emmet 1969:407). The remaining horseshoe appears to have been hand-forged and is possibly older than the other shoes. Given the apparently random distribution of the horseshoes, it appears that the shoes were lost during plowing of the area.

Table 3. Artifacts Recovered from Transects 5-7, Johnson's Bivouac Area.

Activity	Object	Total	Transect	Reading #
Undetermined	Chain	1	4	1
Agricultural	Horseshoe	1	4	3
Undetermined	Carriage Bolt	1	4	4
Agricultural	Horseshoe	1	4	5
Undetermined	Bracket	1	4	7
Agricultural	Barbed Wire/Fence Wire	1	6	1
Agricultural	Horseshoe	1	7	3
Undetermined	Non-electrical wire	1	7	2
Total		8		

The remaining objects appear to be related to agricultural activities conducted on the area not attributable to the brief military occupation of the area on November 29-30, 1864.

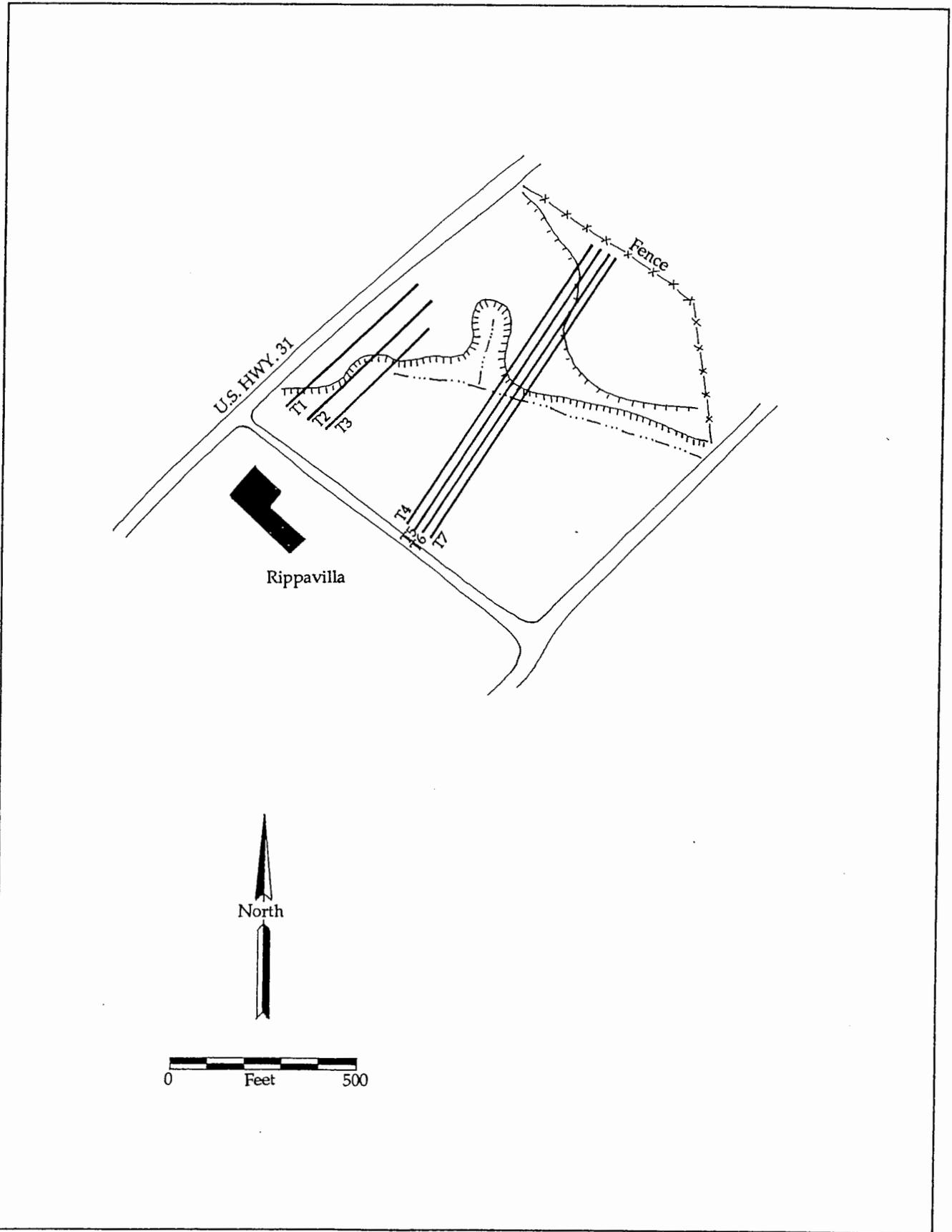


Figure 9. Map Illustrating the Placement of Transects within the Area of Johnson's Bivouac.

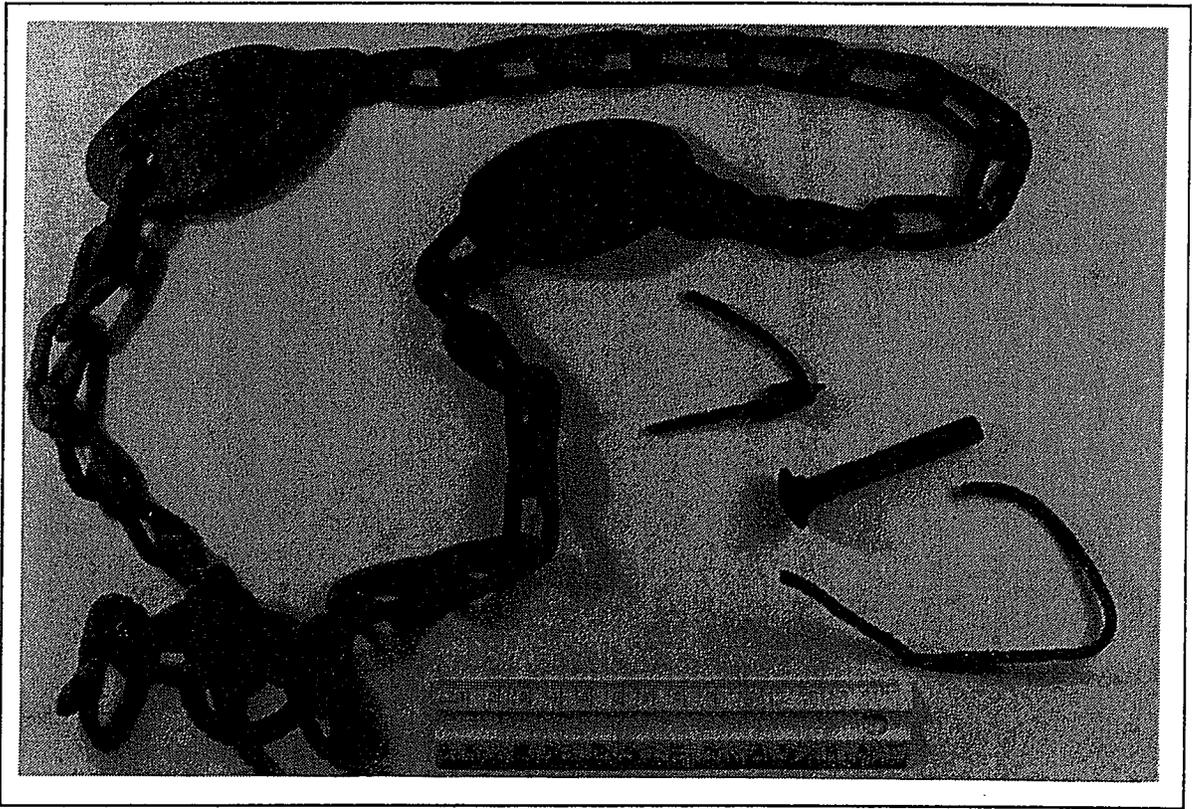


Figure 10. Artifacts Recovered from Johnson's Bivouac Area.

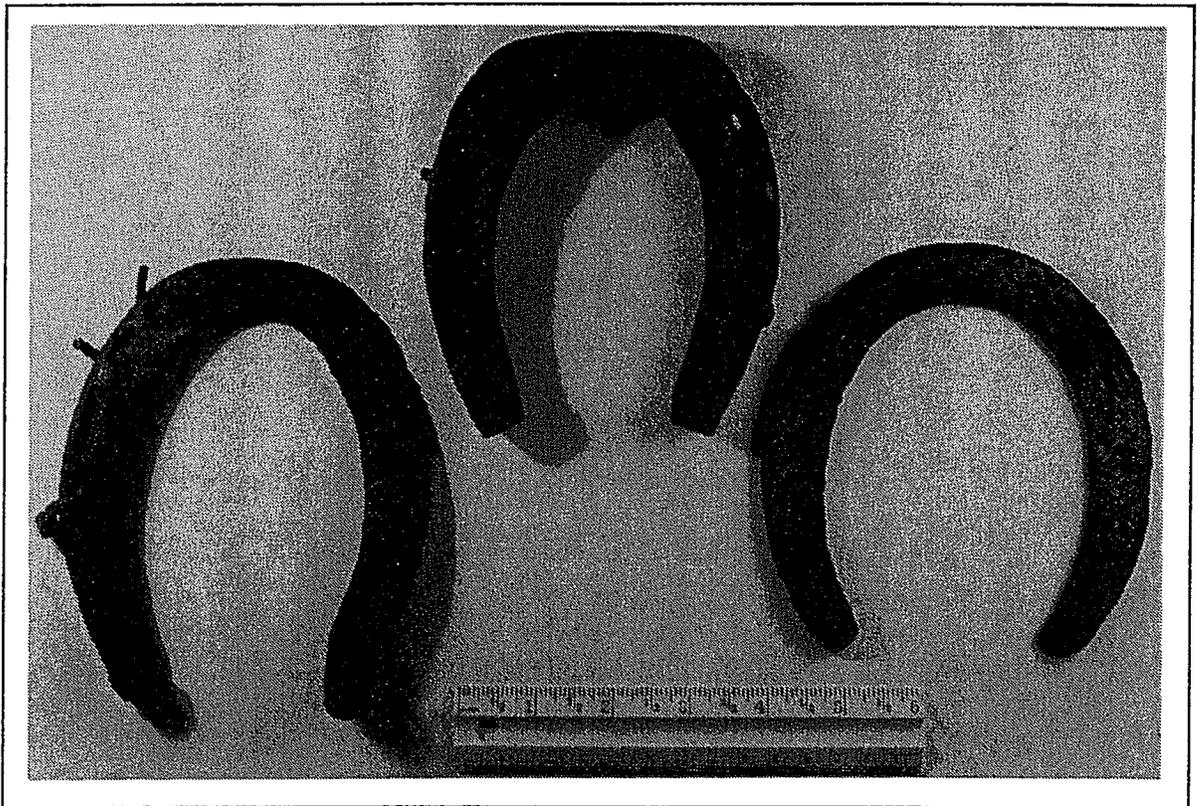


Figure 11. Horseshoes Recovered from Johnson's Bivouac Area.

CHEAIRS' CEMETERY INVESTIGATION

Probing for the Cheairs' cemetery examined two distinct locations north of Rippavilla. The main area encompassed the major part of the knoll and was delimited by several large trees and the right-of-way fence for U.S. Highway 31 (Figure 12). In addition, an overgrown area between two of the larger trees was probed. The other tested region consisted of a narrow swath that extended south from the main area to another large hardwood tree. This secondary area was probed to ensure that graves did not exist off the top of the knoll, closer to the slave quarters.

Upon completion of the testing, no graves had been discovered. The few tests that revealed a low soil density were determined to be tree roots or stump activity when intensively probed. Therefore, these areas were resolved to be anomalies because of irregular shape and inconsistent positive tests. These results indicate that the cemetery was not located in the suspected area, which conflicts with Shellenberger's historical account and relocates the Confederate line to a destination farther north. Based on these conclusions, if one of the other two maps was correct, the cemetery may have been destroyed during the construction of Saturn Parkway or may be located on the northern side of the parkway on property that was inaccessible at the time of the fieldwork. Another possible conclusion is that the cemetery location was misidentified, as it is based on Mr. Cheairs' memory 45 years after the end of the war (Shellenberger 1907).

BRADLEY'S KNOLL

Brigadier General Luther Bradley's brigade was given the responsibility of holding the Federal right flank. Bradley's line, as determined from the historical literature, was positioned on a small knoll approximately 0.5 mile (0.81 km) east of the Columbia-Franklin Pike, 0.5 miles (0.81 km) southwest of Colonel John Q. Lane's position, and 0.6 miles (0.97 km) south of Spring Hill (Figure 13). The elevation of the knoll is approximately 740 feet (225.6 m) above mean sea level (AMSL), providing a clear view of the Columbia-Franklin Pike to the west and southwest and dominating the broad, rolling open fields to the south. Only Weaver's Hill, east of the knoll, and the location of the Spring Hill City Hall, positioned on a ridge northwest of the Federal line, overlook Bradley's knoll at 760 feet (231.6 m) and 780 feet (237.7 m) AMSL, respectively. Bradley's knoll encompasses approximately 45 acres (18.5 hectares) and is currently used for soybean cultivation. The eastern and western boundaries are formed by two small springs, originating on both sides of the

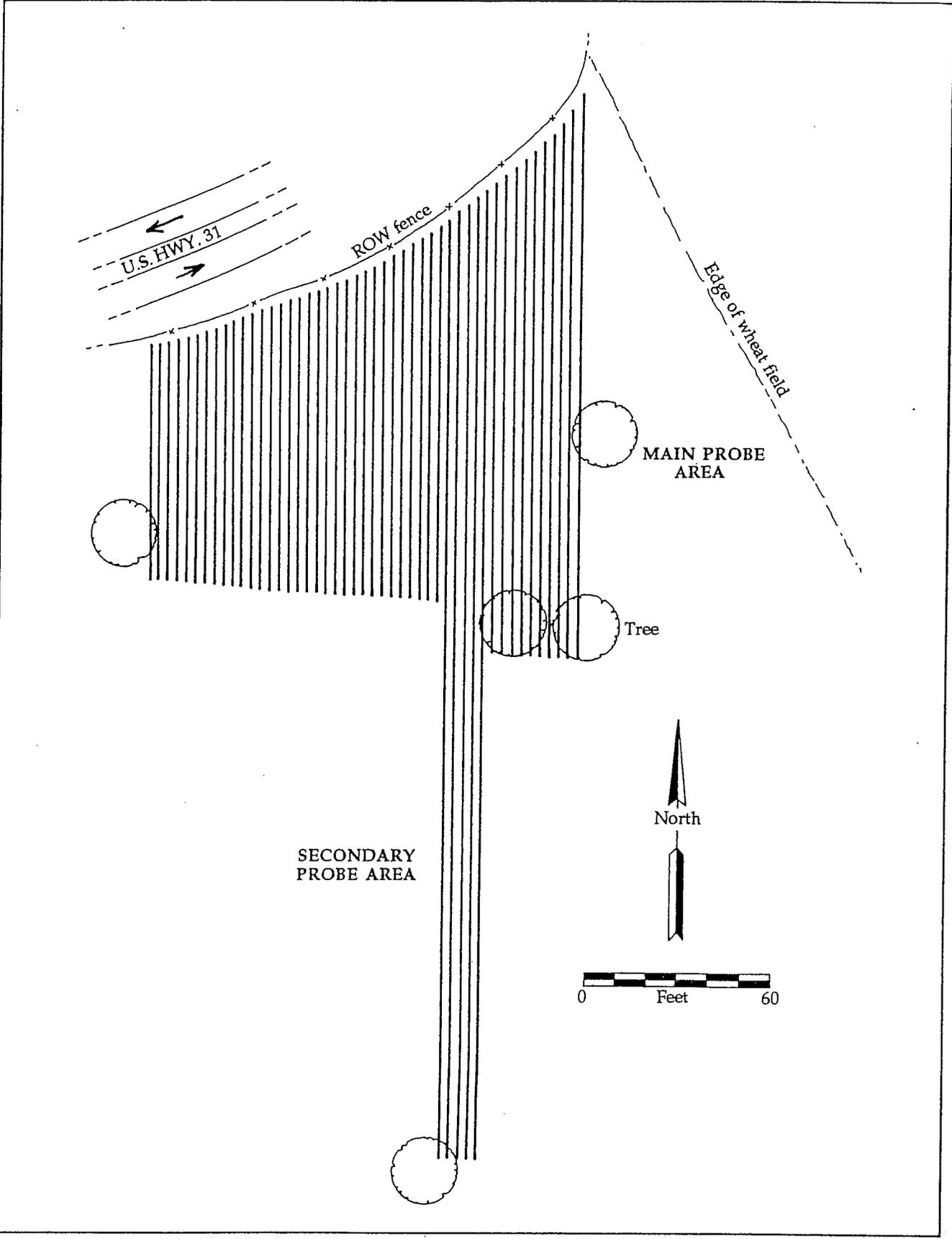


Figure 12. Map of Cemetery Probing Transects at Rippavilla near Johnson's Bivouac Area.

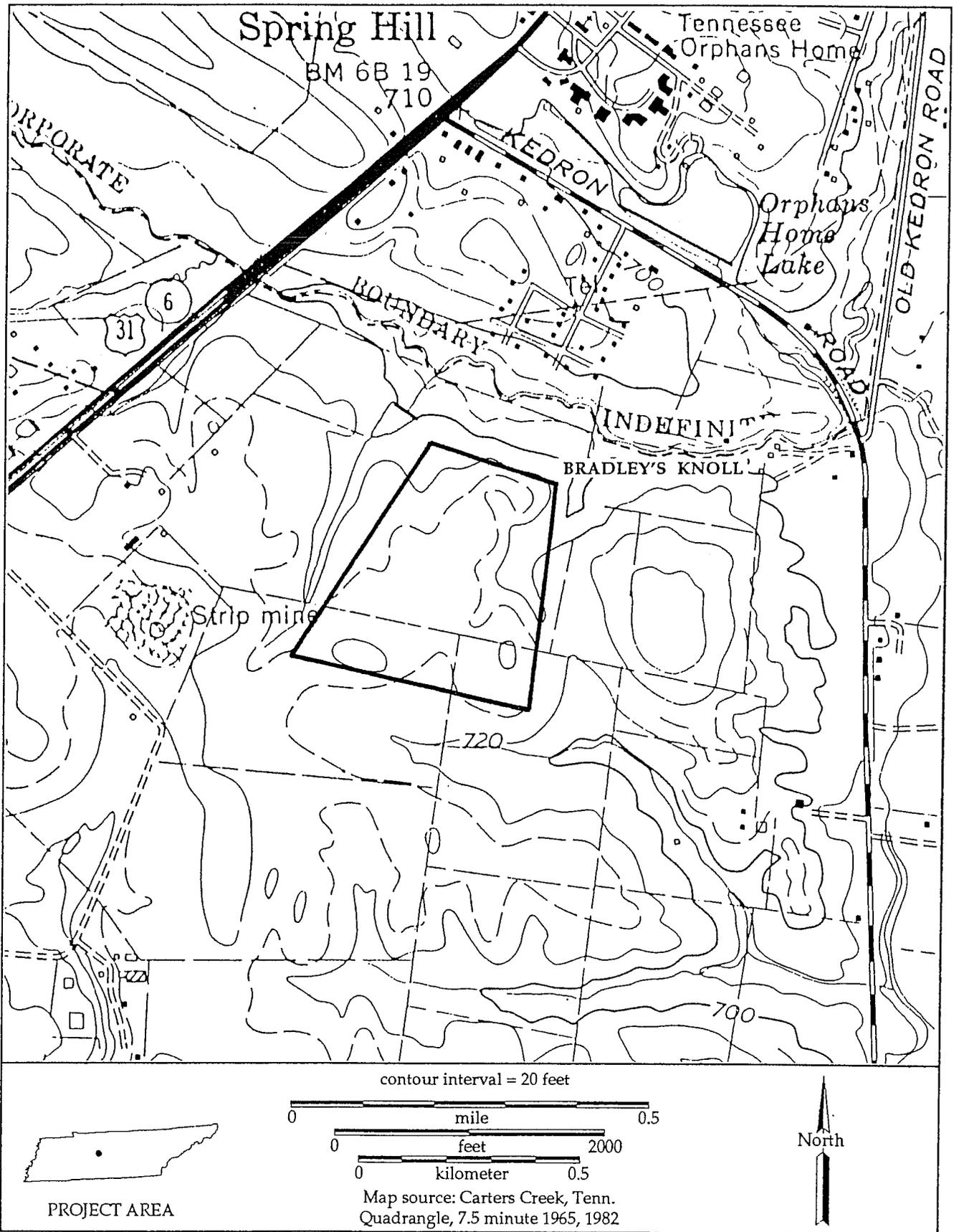


Figure 13. Location of Bradley's Knoll.

knoll, that drain to the north into an unnamed tributary of McCutcheon Creek. A steep slope leading down to the floodplain of the McCutcheon Creek tributary is the northern boundary of the knoll; its southern boundary is formed by a gentle slope to the south.

Descriptions of Bradley's Knoll during the battle indicate that it was partly covered by woods, with an extension of the woods continuing south of the main Federal position for an unspecified distance (Bridges 1971:319; Sword 1994:130). During the 1995 archaeological field survey, it was noted that the present treeline on the eastern edge of the knoll borders the banks of the spring, extending beyond the southern boundary of the highground (Figure 14). The secondary growth currently comprising the wooded area of the knoll provides an effective visual barrier from Weaver's Hill, and it is quite possible that the woods described in the 1864 accounts followed the modern treeline.

The areas to the north, west, and south of the Federal position were noted as being open fields bordered by fences (Atwater 1971:275-276; Bradley 1971:267-269; Brown 1971:283-284; Buckner 1971:279-280; Keesy 1991; Smith 1971:285-287; Stanley 1971: 113; Sword 1994:127-128; Young 1908). As the Federal soldiers of Bradley's brigade reached the knoll, the fence lines were rapidly dismantled and used to construct light barricades.

Bradley's Knoll formed the focal point for much of the fighting at Spring Hill on November 29, 1864. From descriptions of the fighting in the Official Records, a diversity of military artifacts was expected in the archaeological record. Small arms ammunition was anticipated to be the most frequently encountered military artifacts, followed by fragments of artillery shells. Percussion caps, both fired and dropped, would have been present at the time of the fighting; however, preservation of these fragile items was unlikely given the acidic content of the Harpeth soils on Bradley's Knoll.

Verbal permission to examine Bradley's Knoll was obtained by the Spring Hill Battlefield Conservation Council from the tenant leasing the property for soybean cultivation. Given the tenuous nature of the verbal permission and the absence of a signed access agreement from the landowner, all material culture observed during the survey was described, mapped, and photographed, but not removed from the property.

Four metal detector transects were established along the military crest of the knoll, conforming to the presumed positions of Bradley's regiments (Figure 15). Surface visibility was excellent because the knoll had been plowed and planted with soybean prior to the field survey, making it possible to augment the metal detector survey with a surface inspection of the area. The combination of these methods allowed nearly 25 percent coverage of Bradley's Knoll.



Figure 14. View of Bradley's Knoll, Looking East to Weaver's Hill and Showing Modern Treeline.

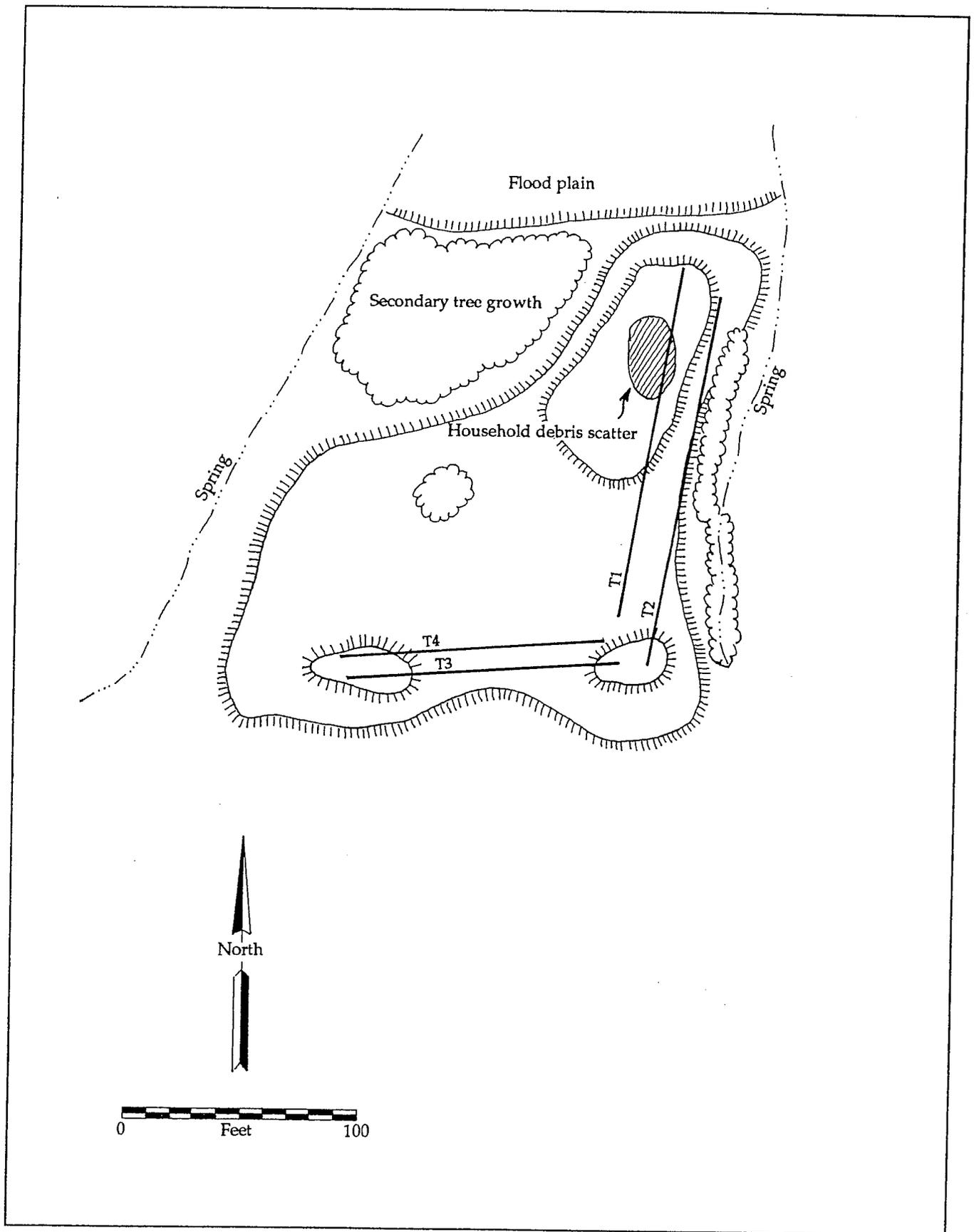


Figure 15. Map of Bradley's Knoll, Showing Location of Transects and Artifact Concentrations.

Seventeen positive readings were recorded by the metal detector survey. Twelve of the readings consisted of cut nail fragments concentrated at the northern end of the knoll (see Figure 15). Artillery shell fragments, consisting of a 12 pound shell and 3 inch ordnance rifle shell casings, were identified along the eastern edge of Bradley's Knoll facing Weaver's Hill (Figure 16). A single .69 caliber musket ball was recorded along the southern edge of the knoll in the approximate location of the 42nd Illinois Infantry and 64th Ohio Infantry regiments (see Figure 16). The remaining two metal objects were too fragmentary to identify type or function.

Compilation of the ordnance returns and ammunition requests for the U.S. Army from 1863-1864 by Coates and Thomas (1990:86-96) indicates that five of the regiments in Bradley's brigade were armed with .58 caliber Springfield and Enfield rifles, the exception being the 51st Illinois Infantry, which was armed with .44 caliber Henry Repeating Rifles. Table 3 presents the shoulder arms carried by each regiment under Bradley's command. From this information, the .69 caliber musket ball recovered from the area of the refused Federal line could not have been used by the Illinois or Ohio infantrymen positioned there.

Comparable information on the Confederate ordnance returns is lacking due to the scattered and incomplete nature of the surviving records. Based upon analysis of extant records, Coates and Thomas (1990:21) noticed large numbers of .54 caliber Austrian "Lorenz" Rifle Muskets being carried by regiments in the Confederate Army of Tennessee. At the beginning of the war, the Army of Tennessee had been largely armed with .69 caliber smoothbore muskets; however, by 1864 a number of the Confederate regiments serving in the western theater had exchanged their older .69 caliber weapons for either captured .58 caliber Springfield rifles or imported .577 caliber British Enfield rifles (Daniel 1991:46-47). Data on the type of muskets carried by the men of Lowrey's and Govan's brigades were not found, making it difficult to determine if the .69 caliber musket ball found at Bradley's Knoll could be attributable to the Confederate assault.

Spherical case shot used by the Federal artillery during the Battle of Spring Hill provides another possible explanation for the .69 caliber musket ball found at Bradley's Knoll. Lead balls of this caliber were used in spherical case shot which was the Civil War equivalent of modern shrapnel and used to silence enemy artillery or to break up enemy infantry formations. Spherical case shot, consisted of a thin-walled, hollow iron sphere filled with lead balls and a powder charge. A fuse was inserted into the shell and was set to explode one to five seconds after the cannon was fired. The exploding shell would scatter the lead balls down onto the enemy. Smoothbore artillery, such as the Napoleon, were well suited for the use of spherical case as anti-personnel rounds. As noted in the historical overview of the battle, the 1st and 6th Ohio Artillery batteries, along with Pennsylvania Light Artillery and Battery M of the 4th U.S. Artillery, were positioned west of the Columbia-Franklin Pike (Figure 17) (Bridges 1971:319-320) within supporting distance of Bradley's Knoll.

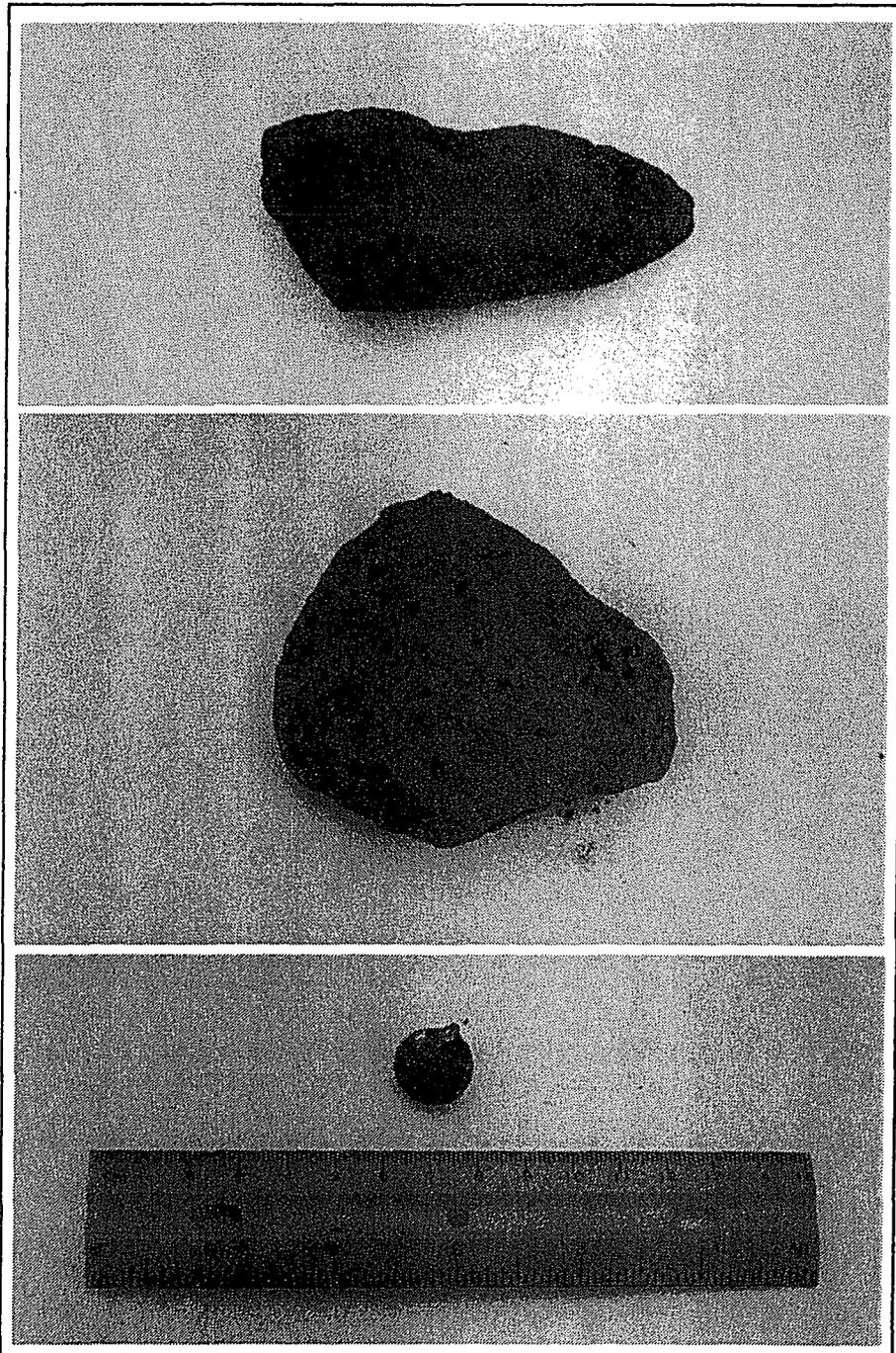


Figure 16. Artillery Shell Fragments and Musket Ball Identified at Bradley's Knoll.

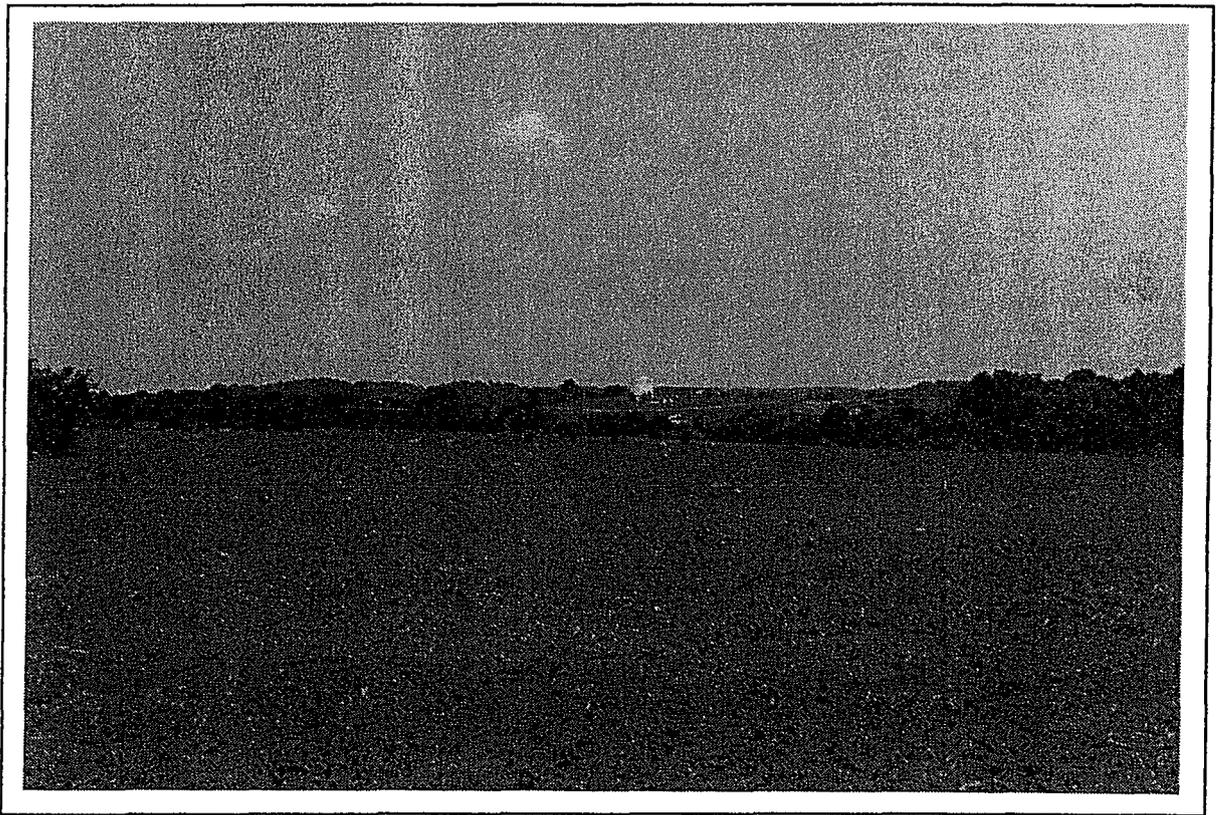


Figure 17. View of Federal Artillery Position near the Spring Hill City Hall,
Looking West from Bradley's Knoll.

During the assault by Cleburne's Division on Bradley's infantry, the artillery fired spherical case shot, along with canister and shell, at the Confederates, eventually halting their advance. The lead ball identified during the survey of Bradley's Knoll could be the remnants of spherical case shot fired during the November 29, 1864, engagement. However, the ball does not exhibit the irregularities or deformities that would be expected from the explosion of the shell. As a result, it is quite possible that the .69 caliber ball represents a Confederate musket round dropped during the attack on Bradley's Knoll.

Table 4. Weapons and Calibers Carried by Bradley's Brigade (after Coates and Thomas 1990).

Regiment	Weapon	Caliber
42nd Illinois Infantry	Model 1840/45 Springfield Rifles	.58
51st Illinois Infantry	Henry Repeating Rifles	.44
79th Illinois Infantry	Mixed model 1861 Springfield and Enfield Rifles	.58
15th Missouri Infantry	Mixed model 1861 Springfield and Enfield Rifles	.58
64th Ohio Volunteer Infantry	Mixed model 1861 Springfield and Enfield Rifles	.58
65th Ohio Volunteer Infantry	Mixed model 1861 Springfield and Enfield Rifles	.58

A dense surface scatter of household and architectural debris was noted during the survey at the north end of Bradley's Knoll (Figure 18; see Figure 15). The scatter measures approximately 25 feet (7.62 m) east-west by 50 feet (15.24 m) north-south, an area of approximately 1,250 square feet (116.13 m²). Artifact categories represented in the scatter included kitchen wares, both ceramic and glass, architectural materials, and personal objects. A number of the objects, most notably the ceramic and glass artifacts, exhibited traces of intense burning. No concentrations of charcoal or burned soil were noted within the area of the scatter during the field survey.

Ceramics imported from England predominated over domestic wares in the assemblage. Early transfer printed and hand-painted tablewares were identified in the scatter (Figure 19), but fragments of plain cream-colored (CC) tablewares were the



Figure 18. View of Bradley's Knoll, Looking North to Possible House Site.

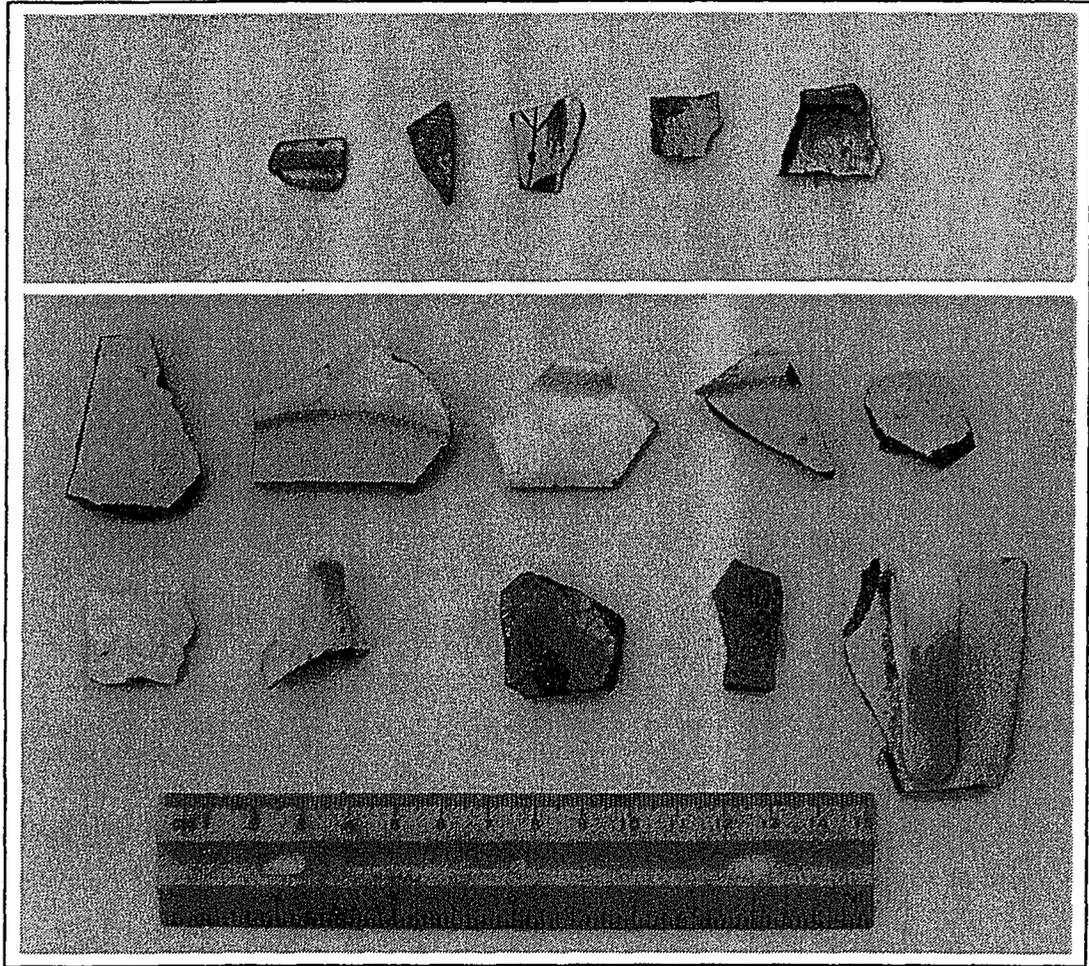


Figure 19. Nineteenth Century Ceramics Identified at Bradley's Knoll.

most frequently (n=21) encountered type of ware. CC wares were the cheapest English ceramics available to the American consumer throughout the nineteenth century (Miller 1991:2). During the examination of the ceramic assemblage from the knoll, it was noted that the sherds exhibited a wide diversity of sizes, ranging from small fragments of less than 0.02 inches (.05 cm) to pieces of greater than 2.0 inches (5.1 cm). Table 4 presents the various ceramic tablewares identified at Bradley's Knoll and their associated mean dates. A mean date of 1853.5 was calculated from these data, indicating a pre-war date for the ceramic assemblage.

Table 5. Mean Ceramic Date for Tablewares Identified at Bradley's Knoll.

Type	Mean Date
Transfer Print, Nineteenth Century Refined Earthenware	1845.0
Polychrome, Nineteenth Century Refined Earthenware	1852.5
Dipped Nineteenth Century Refined Earthenware	1845.0
Plain CC Ware	1855
Yellow Ware	1870
Mean Ceramic Date for Bradley's Knoll	1853.5

Other ceramic items identified at Bradley's Knoll include the neck and spout of a hand-thrown domestic stoneware jug (Figure 20), possibly from the same vessel. The exterior of both fragments were unglazed; the interior surfaces were covered with a clear glaze. A single unglazed, undecorated porcelain marble was also noted among the ceramic fragments at Bradley's Knoll (see Figure 20). German toy manufacturers produced large quantities of marbles throughout the nineteenth century, essentially dominating the market until World War I (Carskadden and Gartley 1990:55). According to a study of marbles from archaeological contexts by Carskadden and Gartley (1990:58-60), undecorated porcelain marbles predate 1850, when toy manufacturers began to decorate porcelain marbles with hand-painted designs to compete with the colorful glass marbles produced in Europe after 1850. This information supports the mean ceramic date of 1853.5 for ceramic tablewares from Bradley's Knoll.

Glass bottle and stemmed ware fragments were also observed in the Bradley's Knoll household debris (Figure 21). Both burned and melted fragments were noted along with unburned specimens. Container glass fragments (n=8) dominated the recognizable vessel forms among the unburnt glass. All of the container glass specimens appear to have been made in moulds with hand-applied string rims. One fragment was noted as having a sloped lip. The majority of the container

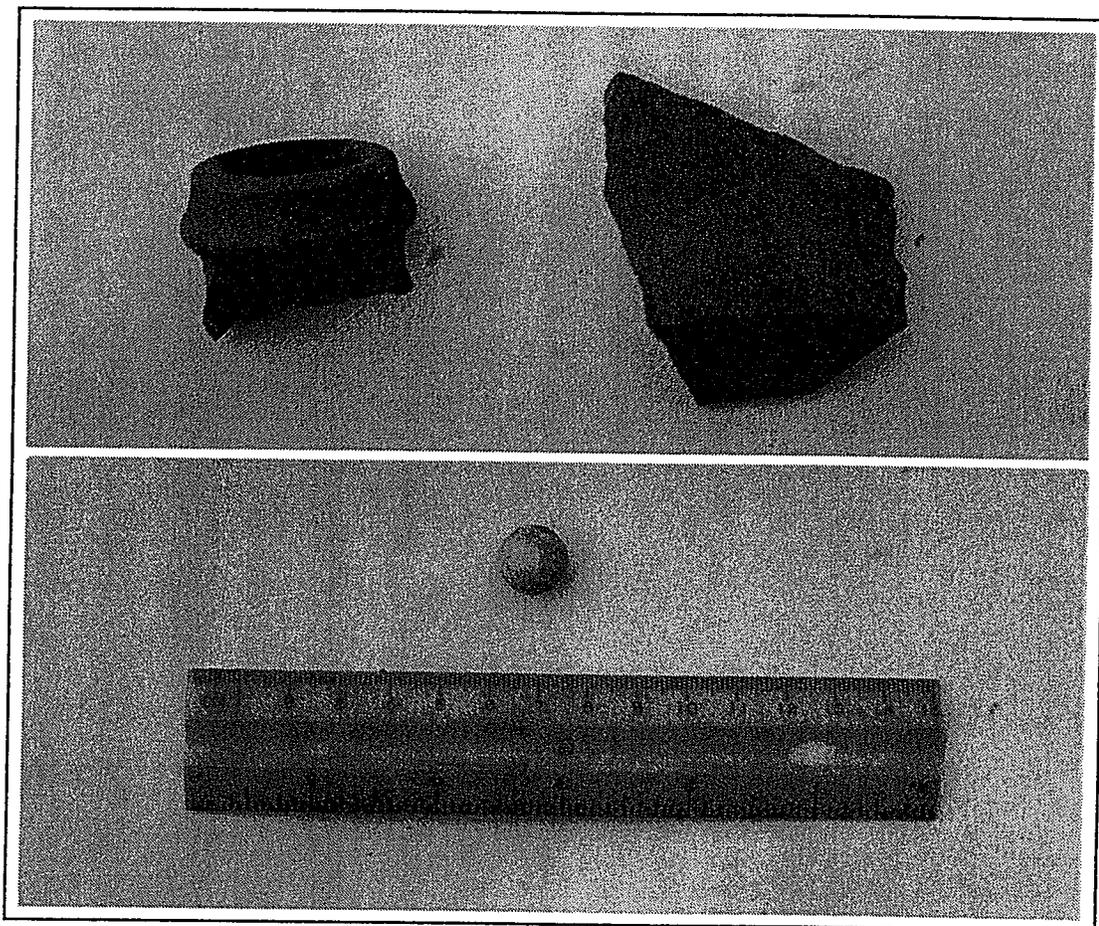


Figure 20. Stoneware Jug and Porcelain Marble Identified at Bradley's Knoll.

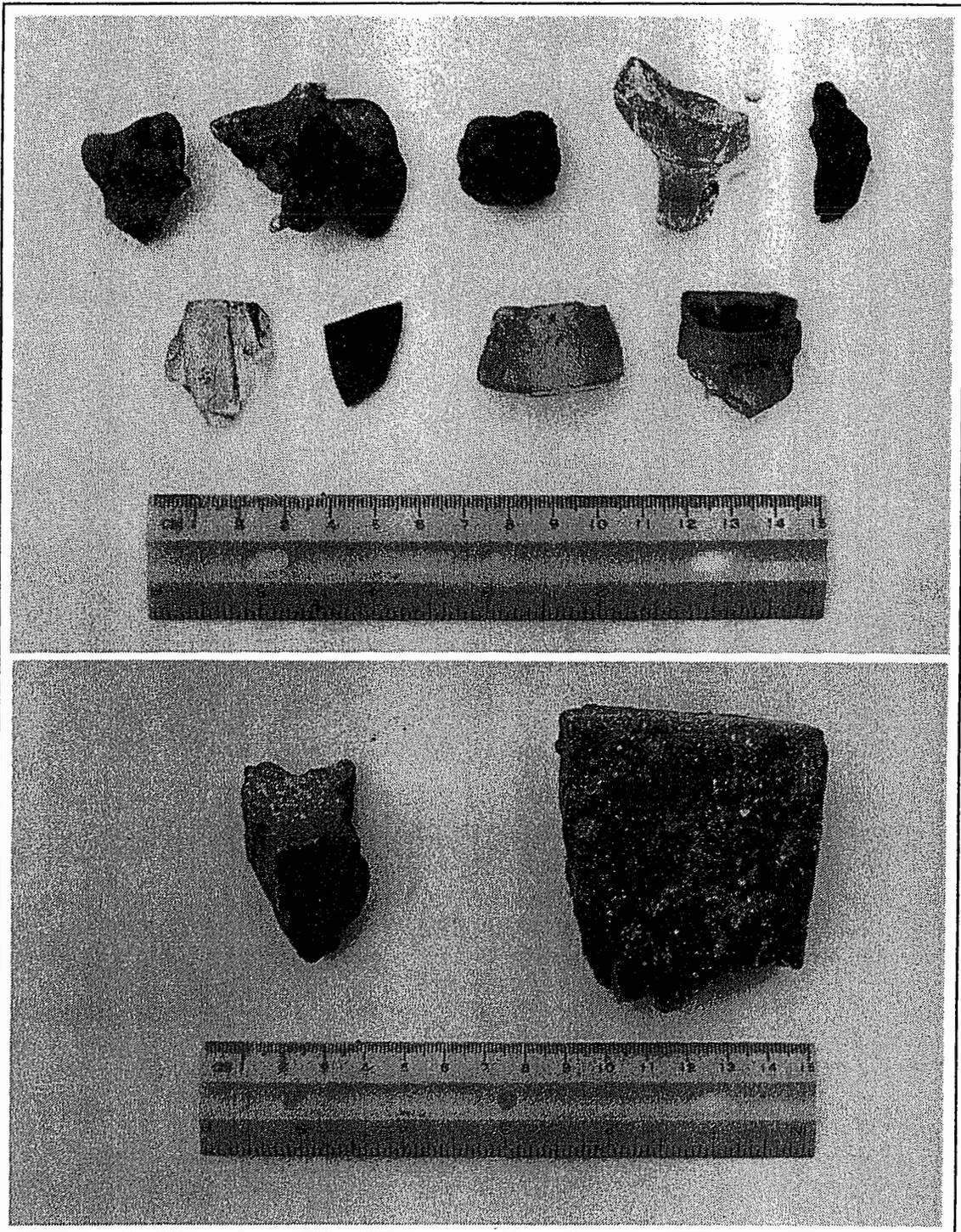


Figure 21. Glass and Brick Fragments Identified at Bradley's Knoll.

fragments (n=5) were made from an aqua-colored glass, with remainder produced from a dark green glass. However, coloration is a product of metallic impurities, most notably iron, in the glass, and studies have shown it to be of little utility in dating container glass on archaeological sites (Jones and Sullivan 1985:12-13). Given the limited numbers of fragments examined in the time allowed for the field inspection, it was not possible to determine the age of the glass artifacts.

An undetermined amount of architectural class materials, including brick rubble and cut nails, was also noted among the Bradley's Knoll domestic debris. Cut nails were the only type of nails identified during the field visit. Among the limited number of nails observed (n=15), both bent and straight specimens were found in roughly equal proportions. Brickbats were also noted in the debris. Two of the fragments exhibited a heavy concentration of ash adhering to one surface, suggesting use in a fireplace.

The combination of the archaeological data from Bradley's Knoll with the historical accounts supports the interpretation of the location as the position of Bradley's brigade during the November 29, 1864, battle. Postwar agricultural plowing of the knoll constitutes the only major impact to the archaeological record. Conversations with local relic hunters indicated that the area has not been extensively searched, as other areas have been, given the absence of landowner approval; this suggests minimal disturbance of the position by relic hunting.

The range of domestic debris found on Bradley's Knoll suggests two possible interpretations: a pre-war domestic refuse scatter or a burned house site. A house located behind General Bradley's line was set on fire by Federal artillery during the battle, from which General Govan rescued the family (Sword 1994:133-134; Young 1908:33). The mean ceramic date of 1853.5, coupled with the presence of burned materials and the range of household and architectural debris found at Bradley's Knoll, provides tentative support for the second interpretation. However, given the limited nature of the archaeological investigations, more intensive survey and testing are required in order to arrive at a more definitive understanding of the function represented by the Bradley's Knoll domestic debris.

WEAVER'S HILL AREA

Weaver's Hill is located immediately east of Bradley's Knoll. The elevation of the hill is approximately 760 feet (231.6 m) AMSL, providing a clear view of the Columbia-Franklin Pike to the west and southwest and dominating the broad, rolling open fields to the south (Figure 22). Only the ridge to the northwest of Weaver's Hill, where Spring Hill City Hall is located, is slightly higher, at an elevation of 780 feet (237.7 m) AMSL. Weaver's Hill encompasses approximately 119 acres (48.15 hectares). The eastern and southern borders of the hill are

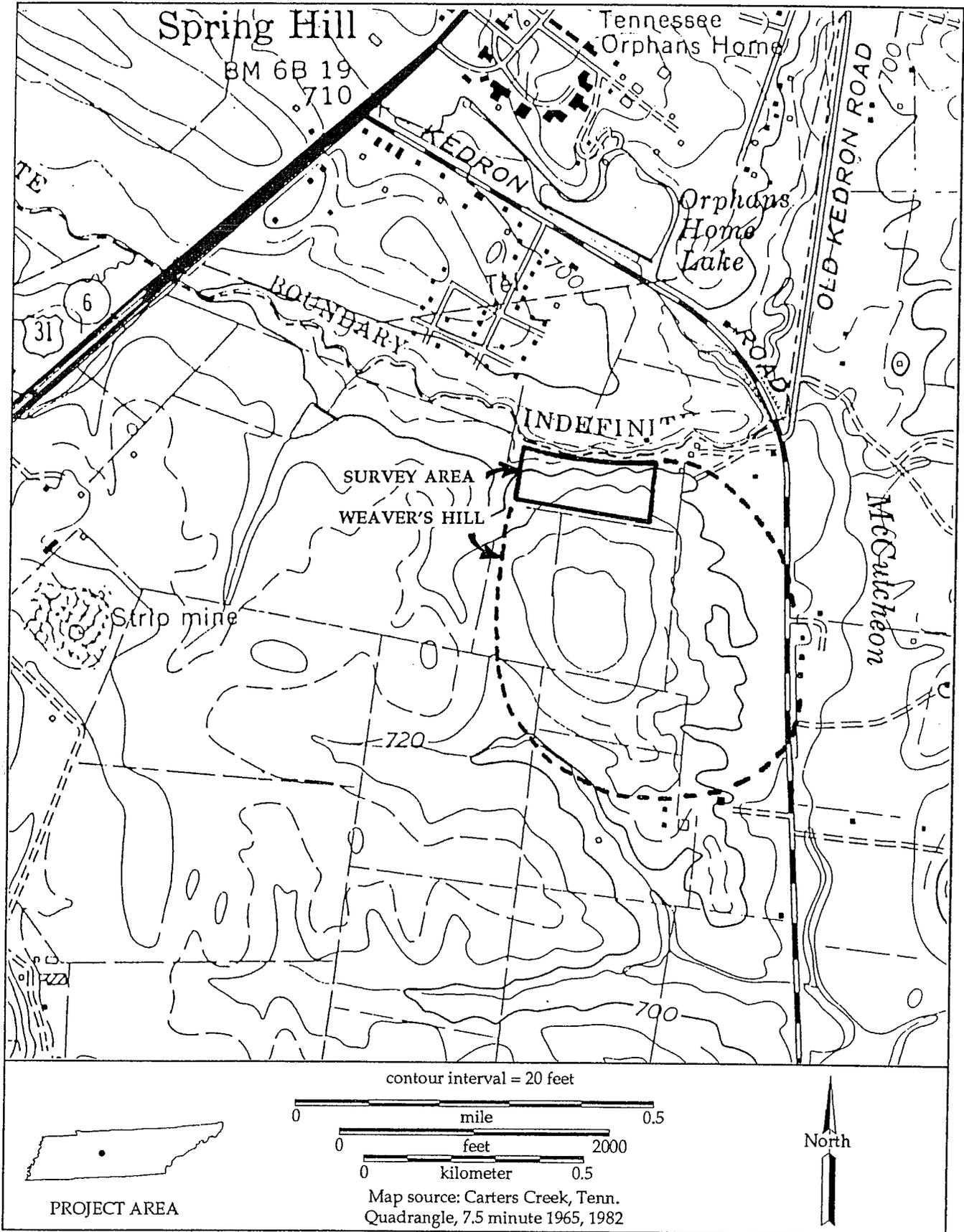


Figure 22. Location of Weaver's Hill.

characterized by moderately gentle slopes that would not impede the Confederate soldiers moving across the area (Figure 23). This is very much in contrast to the western slope of the hill facing Bradley's Knoll where the ground drops sharply to the springhead. Similar topography is found on the northern slope, which drops sharply to a narrow terrace overlooking the unnamed tributary of McCutcheon Creek. The top of Weaver's Hill is relatively flat, encompassing approximately 6.0 acres (2.43 hectares). A clear view of the Columbia-Franklin Pike and the Federal artillery position is available from the top of the hill (Figure 24). From descriptions of the Battle of Spring Hill, Weaver's Hill appears to be the location from which General Forrest and General Hood observed the movement of the Federal infantry columns and wagon trains along the Columbia-Franklin Pike.

Interviews with local relic hunters indicated that Weaver's Hill has been extensively collected. Table 6 lists of the objects found by Mr. Murray Tarkington at Weaver's Hill. The majority of the objects were collected from the western slope of the hill, facing Bradley's Knoll. It was interesting to note the presence of two Henry Rifle casings in Mr. Tarkington's collection, as the 51st Illinois Infantry was armed with Henry Rifles at the time of the Battle of Spring Hill. As noted in the historical overview, the 64th Ohio Volunteer Infantry was originally sent forward as skirmishers for the entire brigade and was slowly driven back to Bradley's main line by the Confederate cavalry. After repulsing Chalmer's cavalry attack, the individual regiments of Bradley's command apparently deployed skirmishers in front of their position on the knoll. During the general advance of Cleburne's Division and Bell's cavalry brigade toward the Columbia-Franklin Pike, the Confederates encountered light opposition by Federal skirmishers before reaching Bradley's main defense line. The recovery of Henry Rifle casings on the western slope of Weaver's Hill suggests the deployment of skirmishers from the 51st Illinois Infantry prior to the main Confederate assault.

Table 6. Military Artifacts Collected By Relic Hunters From Weaver's Hill.

Object	Caliber	Frequency
Prichett Bullets, Dropped	.577	2
Round Musket Ball, Dropped	.69	1
Pistol Ball, Dropped	.44	1
Henry Rifle Casings, Fired	.44	2
Williams Cleaner Bullets, Dropped	.58	4
Musket/Carbine Minie Ball, Dropped	.54	1
Minie Ball, Dropped	.58	12
Total		23

Three metal detector transects were established across the area (Figure 25). Transect 1 was oriented east-west across the western slope of Weaver's Hill, and Transect 2 was positioned parallel to the stream separating the hill from Bradley's Knoll. The

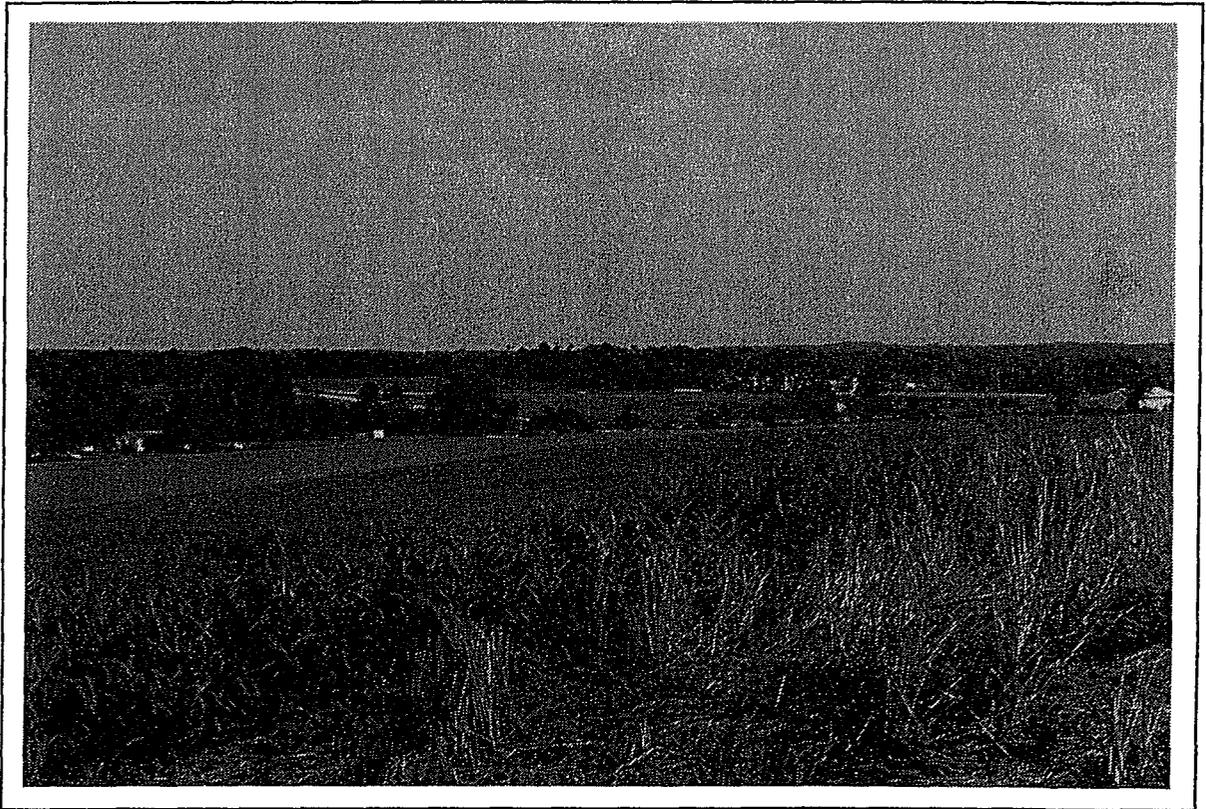


Figure 23. View from Weaver's Hill, Looking Southeast and Showing Area of Cleburne's Advance.



Figure 24. View from Weaver's Hill, Looking West to the Federal Artillery Position.

locations of Transects 1-2 provided an opportunity to examine the area of Weaver's Hill where traces of the fighting between Bell's Confederate cavalry and Bradley's Federal infantrymen occurred. Transect 3 was placed parallel to the stream terrace in the area assumed to be the position of Confederate General John C. Brown's Division on November 29, 1864.

A total of 25 positive readings were made from the three transects. Only two of these, Transect 2, Reading 24, and Transect 3, Reading 25, produced objects relating to the Battle of Spring Hill. The remaining readings consisted of aluminum and tin can fragments (n=5), bottle tops (n=1), wire (n=7), modern hardware and machinery (n=3), square cut nails (n=1), and false readings caused by mineral concentrations (n=6). The paucity of Civil War military objects was not unexpected, given the extensive relic collecting on the property over the past 15 years.

Two military objects recovered during the survey were a spent musket ball and the remains of an exploded Bormann artillery fuse (Figure 26). The musket ball, deformed by impact, weighs 0.37 ounces (11.6 g) and could not be identified as to type or caliber. Despite being deformed, the Bormann fuse was still recognizable. Bormann fuses were extensively used by Federal artillery in projectiles ranging from light 6 pounder howitzer shells to the shells fired by the heavy 32 pounder sea coast guns. The interior of the fuse, containing the timing charge, was missing, apparently destroyed when the shell exploded.

No artifacts were recovered from Weaver's Hill that reflected the occupation of the area by Brown's Division on the night of November 29, 1864. Both the limited amount of time spent in the area by the Confederates and the nature of the activity, namely camping, produce a set of conditions affecting the deposition of archaeological materials similar to those encountered at Johnson's Bivouac area farther to the south. Relic hunting over the past 15 years has seriously affected the archaeological record at Weaver's Hill through the removal of artifacts related to the battle. Based upon the limited field survey, it appears that the archaeological integrity of the Weaver's Hill area has been lost; however, the historical integrity of the area is intact and has great potential to interpret the movements of the Confederates during the battle.

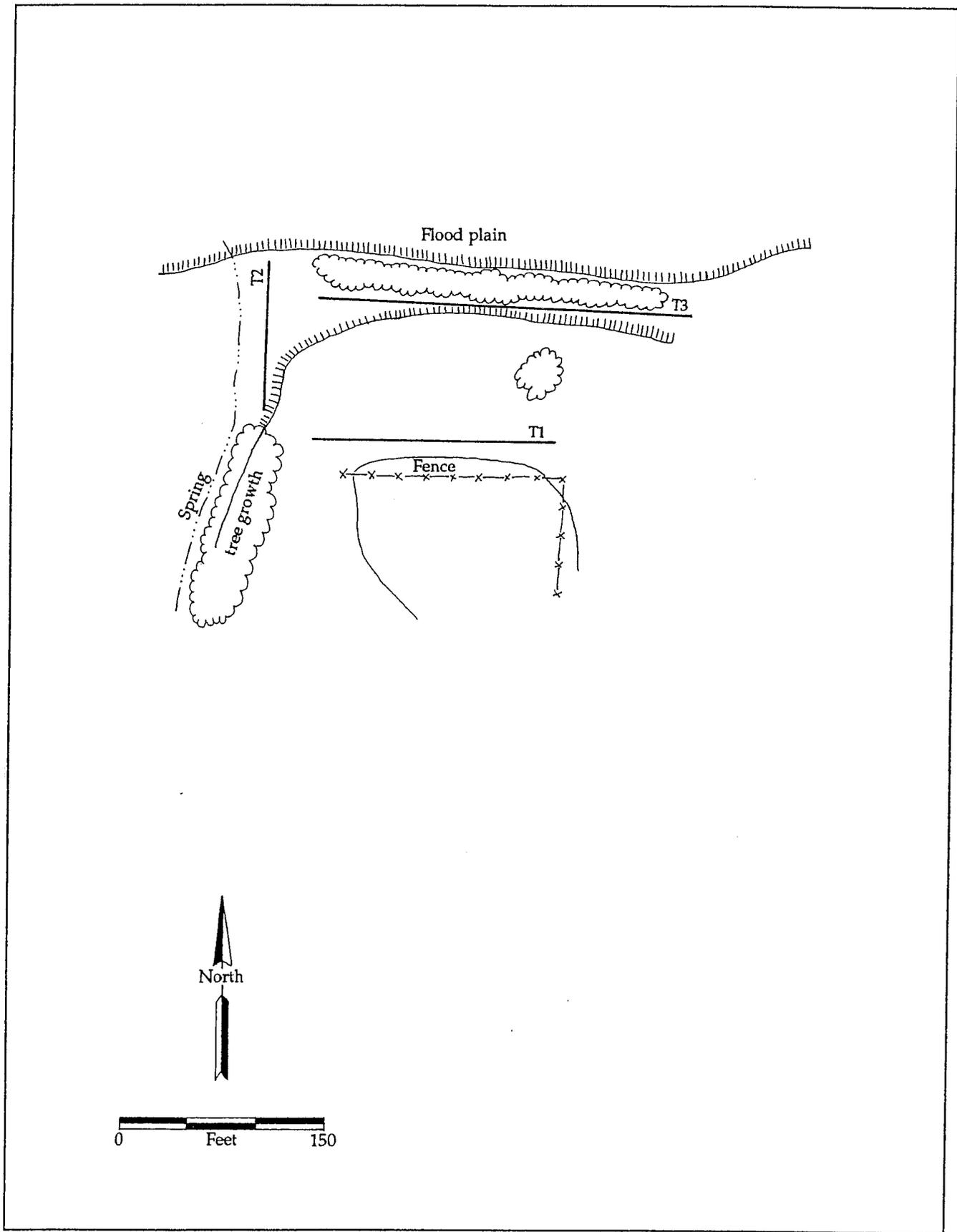


Figure 25. Map Illustrating the Placement of Transects at Weaver's Hill.

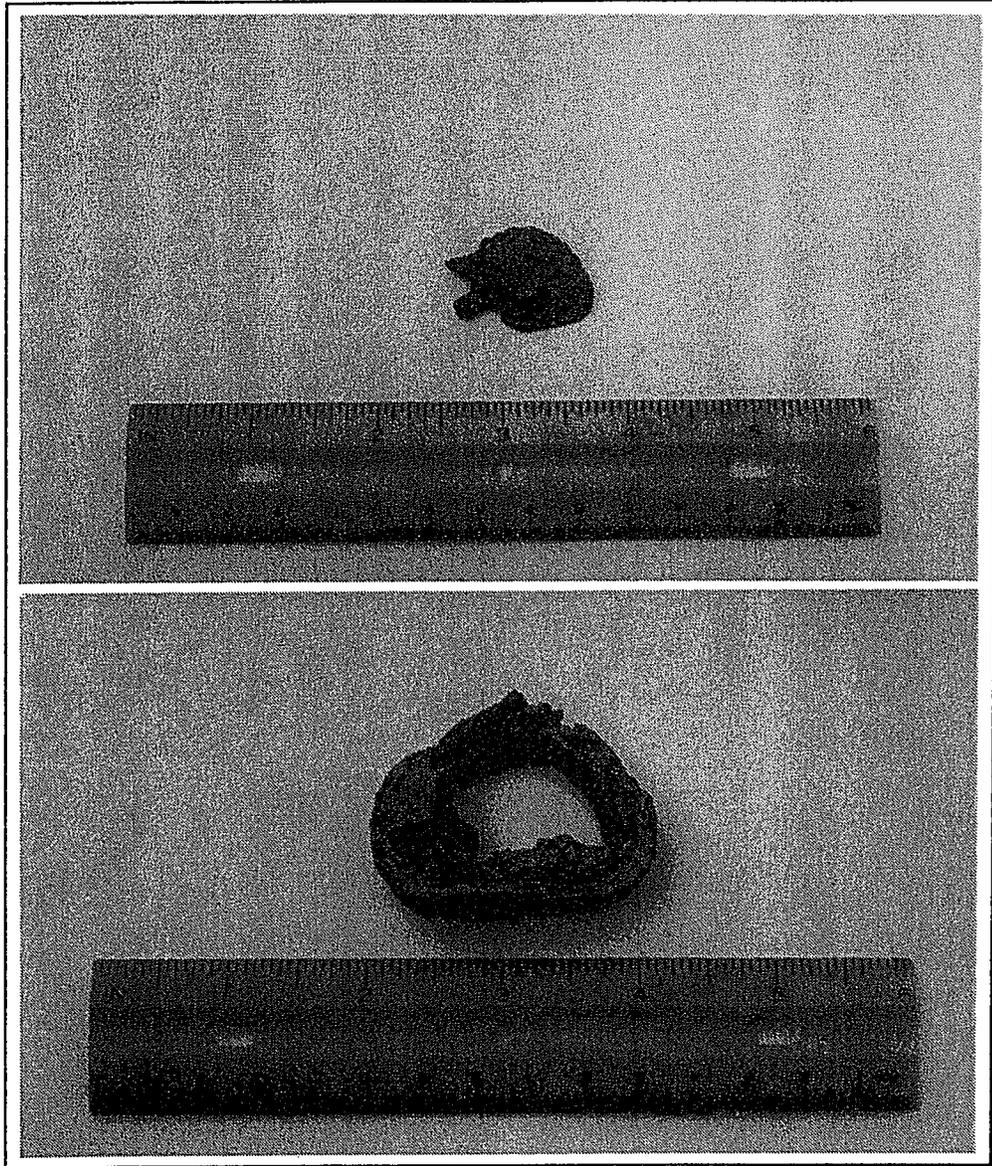


Figure 26. Spent Musket Ball and Bormann Fuse Recovered from Weaver's Hill.

POSSIBLE TOLLHOUSE STRUCTURE

A small, two-room wooden structure (Figure 27), believed to be the tollhouse structure referenced in the after-battle accounts, was visually examined during the field study. The structure is situated east of Weaver's Hill along an abandoned section of the old Rally Hill Pike (Figure 28). Permission to conduct shovel testing around the structure was not obtained, nor was it possible to enter the structure and determine the floor plan with any accuracy. Examination of the structure was, as a result, limited to visual inspection of the exterior.

Inspection of the building indicated that portions of the wooden siding had been replaced with corrugated sheet metal. The siding on the west wall is attached to the framing with wire nails suggesting a post-1900 date (Figure 29). All of the remaining windows are of post-Civil War manufacture, with the exception of the single front window, which may be antebellum in origin. The floor joists beneath the structure are circular-sawn.

An evaluation of the photographs and description of the structure was conducted by Ms. Ellen Ehrenhard, Senior Preservation Planner of the Garrow & Associates staff. Based upon her analysis, the structure is an example of the double-penned saddlebag tenant houses built between 1880 and 1885. Based upon the results of the field study, the structure believed to be the tollhouse mentioned in the Confederate after-battle reports actually postdates the Civil War and is reflective of the architectural types more common in the South during the Reconstruction period.

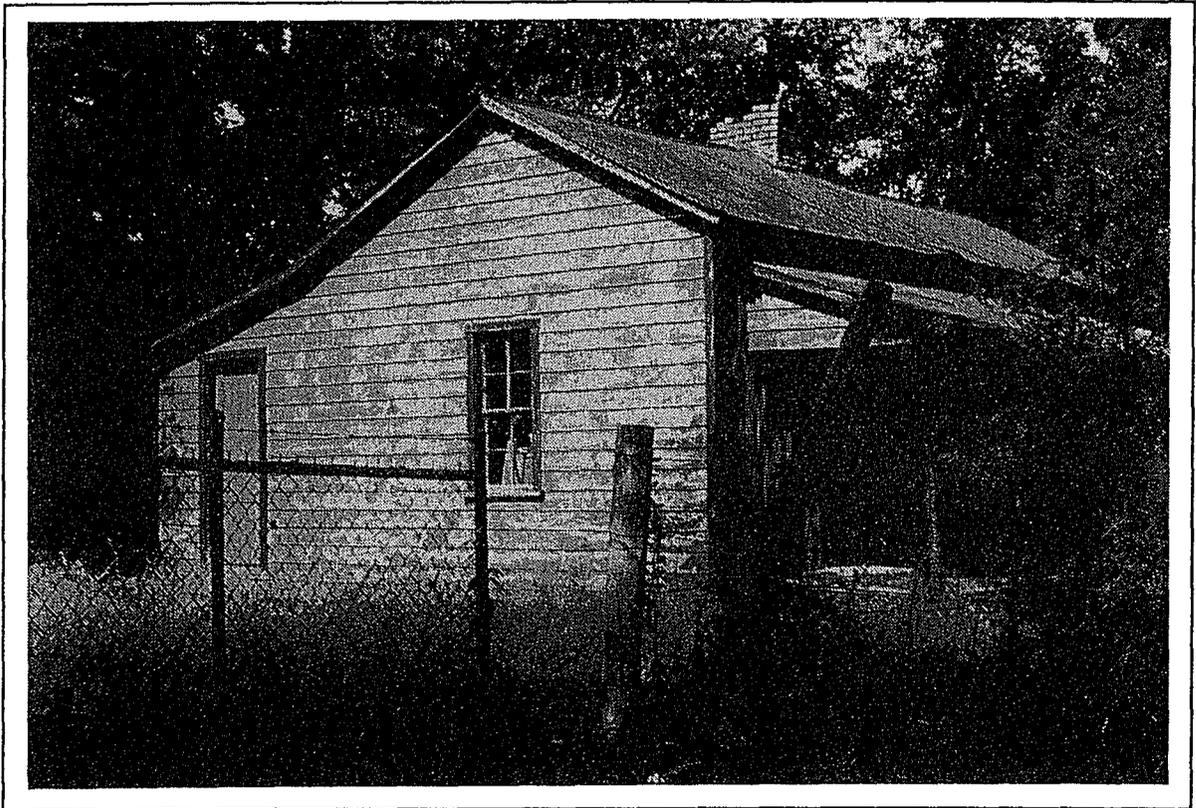


Figure 27. View of Possible Tollhouse Structure, Looking East.

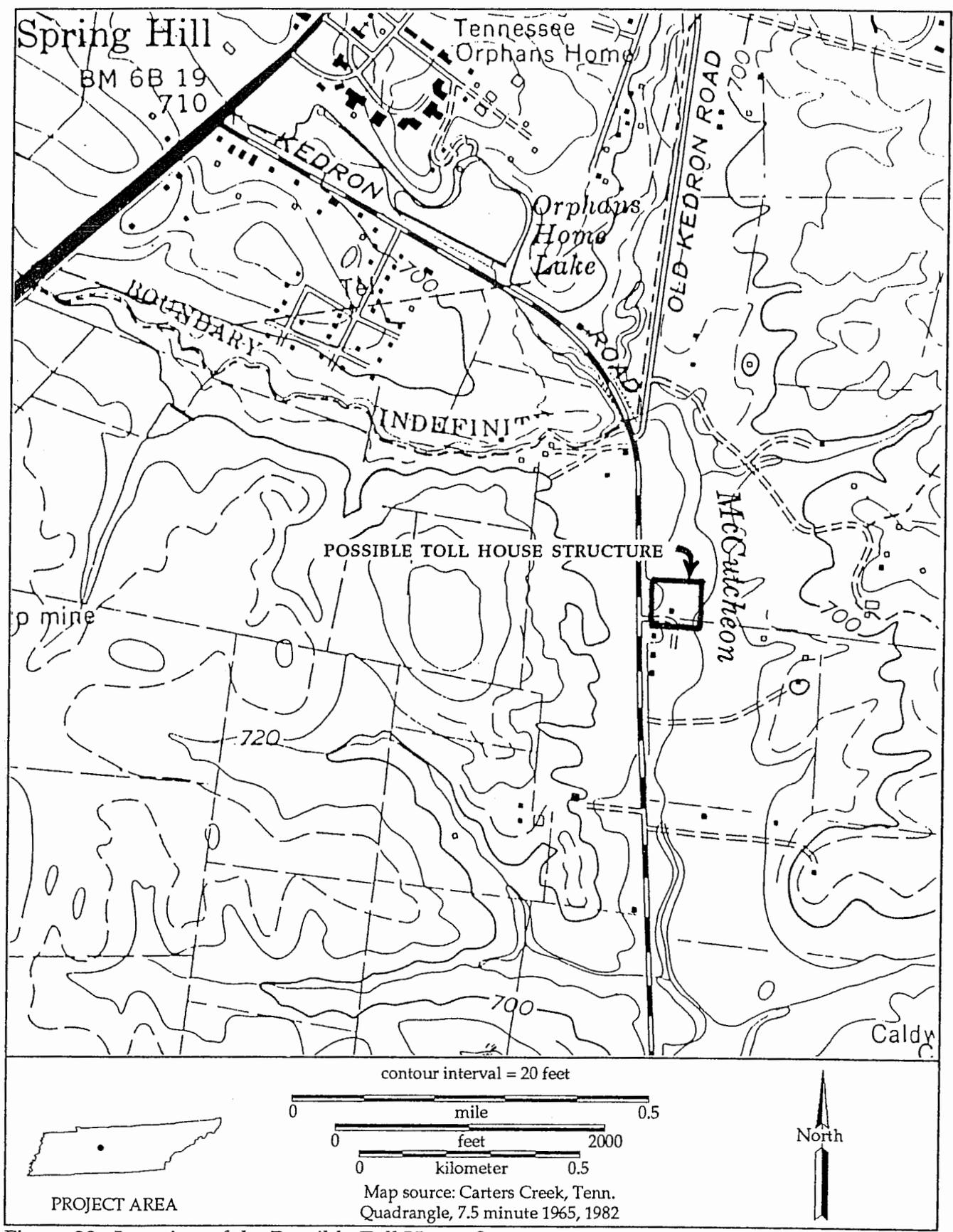


Figure 28. Location of the Possible Toll House Structure.

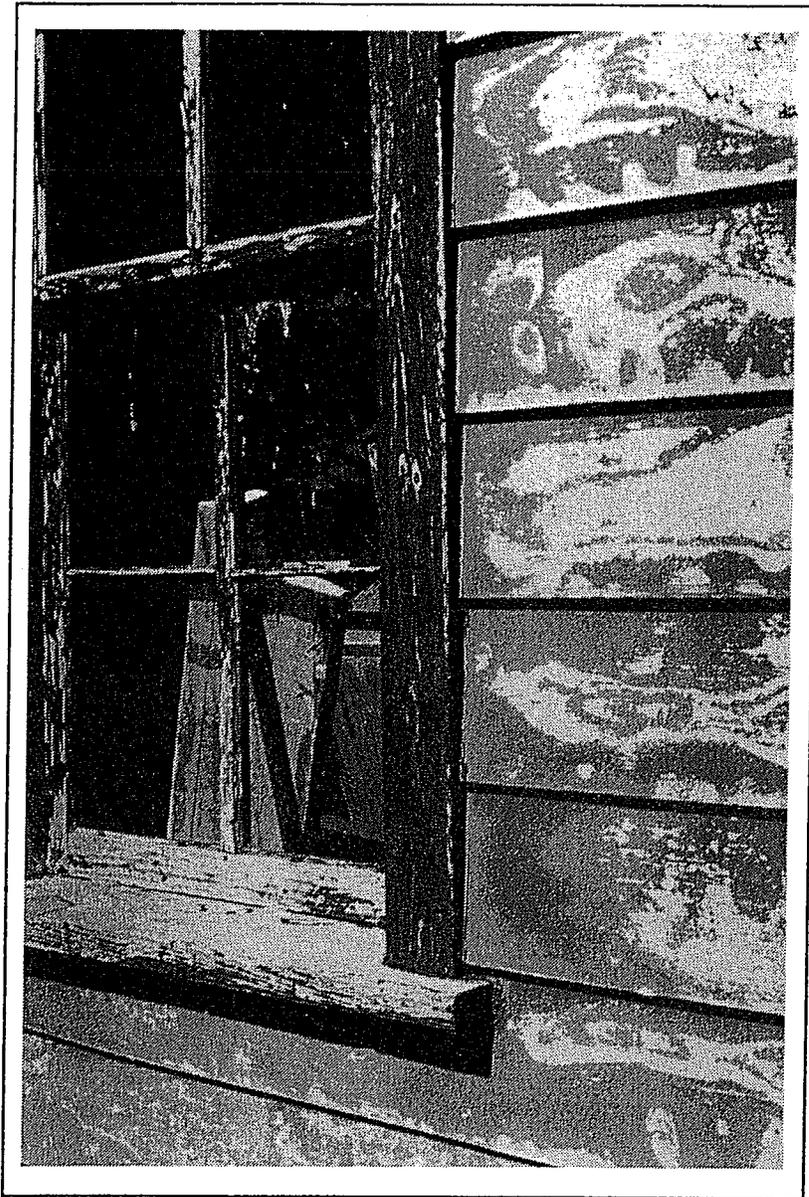


Figure 29. Detail of Siding and Window Treatment.

VI. SUMMARY AND CONCLUSIONS

SUMMARY

A limited archaeological field survey of the Civil War battlefield at Spring Hill, Tennessee, was conducted for the Spring Hill Battlefield Preservation Council. The purpose of the project was to survey the Civil War battlefield resources of Spring Hill in order assist in delineating the core areas of the battlefield. A historical documents review was conducted to gather data on the locations and types of military activities in Spring Hill during the November 29, 1864, engagement. Six areas were selected for a limited archaeological survey. Archaeological fieldwork took place from June 12-16, 1995. Three of the sites produced direct evidence of the military activities described in the various historical accounts of the 1864 battle at Spring Hill. Two locations, Johnson's Bivouac area south of Spring Hill and the Tollhouse area southeast of the town, did not produce any archaeological evidence of the military actions. The location of the unmarked slave cemetery on the Cheairs' estate was not identified during the survey. The remaining three locations did produce evidence relating to the Battle of Spring Hill. As a result of the 1995 archaeological study, the location of General Bradley's brigade was identified. The possible remains of a domestic structure situated near the Federal position was also tentatively identified from archaeological remains.

CONCLUSIONS

The purpose of the 1995 archaeological field survey of the Spring Hill Battlefield was to recover data that would be useful in delineating the boundaries of the battlefield. Distribution of the archaeological data gathered during the study supports the locations for the Federal and Confederate positions presented in both White Star Consulting's (1995) assessment of the battlefield and Young's (1908) account of the Spring Hill engagement.

The study has tentatively identified the location of Bradley's line, the focal point of the November 29, 1864 fighting, and the possible remains of an antebellum house known to have been near Bradley's command. Postwar disturbance to the area appears to be limited to agricultural plowing. Relic hunting has not disturbed Bradley's Knoll as extensively as other portions of the Spring Hill Battlefield. As a result, the archaeological deposits at Bradley's Knoll have potential to provide further information on both the battle and the lifestyle of the local inhabitants. An intensive Phase I study is recommended for the area of Bradley's Knoll to provide confirmation of the military and domestic activities in the area. Given the importance of the Bradley's position during the Battle of Spring Hill it is highly recommended that the Spring Hill Preservation Council, with the cooperation of

the Association for the Preservation of Civil War Sites, seek to acquire the property for preservation and interpretation.

The area of Weaver's Hill immediately east of the spring is also recommended for further examination for additional traces of the battle. A more intensive survey of the western slope of the hill and the stream bank may produce additional information on the movements and fighting between the Federal skirmishers and the Confederate cavalry during the opening stages of the battle. Weaver's Hill is currently being acquired by the APCWS for preservation.

Due to the ephemeral nature of bivouac events, it was not possible to provide confirmation through the archaeological record that the area north of Rippavilla was used as a temporary campsite by the men of Johnson's Division. The topographical setting of the archaeologically examined location corresponds to the historical references of the Confederate encampments at Spring Hill. Despite the lack of archaeological integrity at Johnson's Bivouac area, the location has retained its historical integrity and its role in the battle of November 29, 1864, can still be interpreted to the general public. There exist no threats to the future preservation of the area. The development of interpretative signage describing the movements of Bate's Division and Johnson's Division through the area is recommended. No further archaeological investigation of Johnson's Bivouac area are recommended.

Visual inspection of the possible tollhouse structure has suggested that it is of postwar construction. Because the lack of landowner permission precluded systematic shovel testing to determine whether antebellum deposits relating to an earlier structure are present, a Phase I archaeological survey is recommended at that location.

Given the importance of the Spring Hill Battlefield to understanding the events and strategy underlying General Hood's invasion of Middle Tennessee in 1864, it is recommended that the Spring Hill Battlefield be nominated for inclusion in the National Register of Historic Places. Urban growth and development at Nashville and Franklin, Tennessee have adversely impacted the Civil War resources relating to the 1864 campaign. The limited development that has occurred on the Spring Hill Battlefield to date has not affected, to the same degree, the potential of the site to interpret the battle and the strategy of the last major campaign of the Confederate Army of Tennessee.

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1978 *American Military Equipage, 1851-1872*. Charles Scribner's Sons, New York.

Wagner, George D.

1971 Reports of Brigadier General George D. Wagner, U.S. Army, commanding Second Division, of operations November 22-December 2, 1864. In *War of the Rebellion: Official Records of the Union and Confederate Armies*, Series I, Vol. 45, Part I, pp. 229-233. Reprinted. The National Historical Society, Harrisburg, Pennsylvania. Originally published 1897, U.S. Government Printing Office, Washington, D.C.

White Star Consulting

1995 *Preservation Action Plan for the Spring Hill, Tennessee Battlefield*. White Star Consulting, Huntsville, Alabama. Submitted to The Association for the Preservation of Civil War Sites, Fredericksburg, Virginia.

Woodhead, Henry (editor)

1991a *Echoes of Glory: Arms and Equipment of the Union*. Time-Life Books, Alexandria, Virginia.

1991b *Echoes of Glory: Arms and Equipment of the Confederacy*. Time-Life Books, Alexandria, Virginia.

Young, J. P.

1908 Hood's Failure at Spring Hill. *Confederate Veteran* 16(1):25-41.

Ziegler, Jacob

1971 Reports of Captain Jacob Ziegler, Battery B, Pennsylvania Light Artillery, of operations November 23-December 1 and December 15-31, 1864. In *War of the Rebellion: Official Records of the Union and Confederate Armies*, Series I, Vol. 45, Part I, pp. 336-337. Reprinted. The National Historical Society, Harrisburg, Pennsylvania. Originally published 1897, U.S. Government Printing Office, Washington, D.C.

Appendix 1: Resumes of Key Personnel

Robert J. Fryman, Ph.D.
Garrow & Associates, Inc.

Education

B.A., Anthropology, Youngstown State University, 1976
Ph.D., Anthropology, University of Pittsburgh, 1983

Dissertation

The Excavation of the Sprucevale Pottery: A Study in Nineteenth Century Industrial Archaeology. Dr. James B. Richardson, III, advisor.

Areas of Specialization

Historical Archaeology; Urban Archaeology; Historic ceramic technology; Civil War Military Sites Archaeology; Archaeological perspectives on ethnicity; Prehistoric Archaeology of eastern North America; Cultural Resource Management

Certifications

U. S. National Park Service: Archaeological Resource Protection Training, November, 1989
Society of Professional Archaeologists: Certified in Field Research and Historical Archaeology, December 1992
GSA Interagency Training Center: Introduction to Federal Projects and Historic Preservation Law, February, 1993

Honors And Awards

1994 Kent State University, East Liverpool Campus, Wall of Fame Distinguished Service Award. Award presented for twelve years of distinguished teaching and service to the university.

1994 Ohio House of Representatives, Letter of Recognition. Award presented for distinguished teaching and service to Kent State University, East Liverpool Campus.

1990 Citizen of the Year, Columbiana County, Ohio. Award presented for contributions in Historic Preservation and Public Education.

Professional Memberships and Offices

Society of Professional Archaeologists
Society for Historical Archaeology
 1998 Program Chairperson, 31st Annual Meeting
Society for American Archaeology
American Anthropological Association
Georgia Professional Council of Archaeologist
Symposium on Ohio Valley Urban and Historic Sites Archaeology
 1992-Present Editor, *Ohio Valley Historical Archaeology*
 (Formerly *Proceedings of the Symposium*)
 1986-1991 Associate Editor, *Proceedings of the Symposium*

Professional Experience

1992-Present Senior Archaeologist, Garrow & Associates, Inc., Atlanta, Georgia.
1993-Present Instructor (Part-Time) of Anthropology, Georgia State University, Atlanta, Georgia.
1980-1992 Assistant Professor (PT-C) of Anthropology, Kent State University, East Liverpool Campus, East Liverpool, Ohio.
1986-1991 Director, East Liverpool Museum of Ceramics, East Liverpool, Ohio.
1984-1986 Visiting Lecturer of Anthropology, University of Steubenville, Steubenville, Ohio.
1986 Field Archaeologist, GAI Consultants, Inc., Monroeville, Pennsylvania.
1981 Museum Practicum, Section of Anthropology, Carnegie Museum of Natural History, Pittsburgh, Pennsylvania.
1980-1981 Field Archaeologist, Archaeological Assessments, Inc., Nashville, Arkansas.
1980 Field Technician, Section of Anthropology, Carnegie Museum of Natural History, Pittsburgh, Pennsylvania.
1979 Instructor of Anthropology, Department of Sociology and Anthropology, Youngstown State University.
1977-1979 Graduate Teaching Fellow, Department of Anthropology, University of Pittsburgh, Pennsylvania.
1975-1976 Field Technician, Department of Sociology and Anthropology, Youngstown State University, Youngstown, Ohio.

Field Experience

- 1995 Principal Investigator and Field Director, Garrow & Associates, Inc., Archaeological Survey of the Spring Hill, Tennessee Battlefield for the Spring Hill Conservation Council, Spring Hill, Tennessee.
- 1995 Principal Investigator and Field Director, Garrow & Associates, Inc., Phase I Level Survey of site 9BL133, Georgia Military College, Milledgeville, Baldwin County, Georgia.
- 1994 Principal Investigator and Field Director, Garrow & Associates, Inc., Phase III Data Recovery of the Civil War Trenches at Loring's Position (9Co352), Cobb County, Georgia.
- 1994 Principal Investigator and Field Director, Garrow & Associates, Inc., Survey of the Newtonia, Missouri Civil War Battlefields for the National Park Service and Newtonia Battlefield Protection Association, Missouri.
- 1994 Principal Investigator and Field Director, Garrow & Associates, Inc., Phase I Survey, Acworth RTC Tract, Cobb County, Georgia.
- 1994 Principal Investigator and Field Director, Garrow & Associates, Inc., Phase I Reconnaissance, Civil War Redoubt, Dalton Municipal Airport, Whitfield County, Georgia.
- 1994-1995 Principal Investigator, Garrow & Associates, Inc., Phase III Data Recovery on Six Sites within the Proposed Big Haynes Creek Reservoir, Rockdale County, Georgia.
- 1994 Principal Investigator and Field Director, Garrow & Associates, Inc., Phase I Reconnaissance, Civil War Fortifications, Davis Corners Battlefield, Cobb County, Georgia.
- 1994 Principal Investigator and Field Director, Garrow & Associates, Inc., Phase I Reconnaissance, Haralson Mill Historic District, Rockdale County, Georgia.
- 1994 Principal Investigator and Field Director, Garrow & Associates, Inc., Phase I Cultural Resources Survey of the Proposed Coosawattee Trail Project, Gordon County, Georgia.
- 1994 Principal Investigator, Garrow & Associates, Inc., Phase II Archaeological Testing of Site 9Ht40, Robins Air Force Base, Houston County, Georgia.

- 1993-1994 Principal Investigator, Garrow & Associates, Inc., Preparation of Historic Preservation Plans for Fort Benning, Fort Gillem, and FORSCOM Recreational Area, Georgia
- 1993 Principal Investigator, Garrow & Associates, Inc., Phase I Cultural Resources Survey of the Proposed U.S. Route 1 Widening Project, Appling County and Bacon County, Georgia.
- 1993 Principal Investigator, Garrow & Associates, Inc., Phase I Cultural Resources Survey of Johnston's (CSA) 1864 River Defense Line, Cobb County, Georgia.
- 1993 Principal Investigator, Garrow & Associates, Inc., Phase II Testing Excavations at Loring's Position (9Co352), Cobb County, Georgia.
- 1993 Principal Investigator, Garrow & Associates, Inc., Development of Museum Exhibit Design entitled "Windows to A Distant Past: Archaeology at Robins Air Force Base", Robins Air Force Base, Houston County, Georgia.
- 1993 Principal Investigator, Garrow & Associates, Inc., Phase I Cultural Resource Survey of Fort McPherson, Fulton County, Georgia.
- 1993 Principal Investigator, Garrow & Associates, Inc., Phase I Cultural Resource Survey of the Tennessee Army National Guard, Catoosa Area Training Center, Catoosa County, Georgia.
- 1993 Principal Investigator, Garrow & Associates, Inc., Development of Cultural Resource Management Plan for Robins AFB, Houston County, Georgia.
- 1993 Principal Investigator, Garrow & Associates, Inc., Phase I Cultural Resource Survey of the Proposed Eastman-North Dublin Transmission Line Corridor, Laurens County, Georgia.
- 1992 Principal Investigator, Garrow & Associates, Inc., Phase I Cultural Resource Survey of Fort Tyler, Troup County, Georgia.
- 1992 Principal Investigator, Garrow & Associates, Inc., Phase II Cultural Resources Testing at 9Ht8, Warner Robins AFB, Houston County, Georgia.
- 1992 Principal Investigator, Garrow & Associates, Inc., Phase I Cultural Resource Survey of the Proposed Shoal Creek Reservoir, Henry County, Georgia.
- 1992 Principal Investigator, Garrow & Associates, Inc., Phase I Cultural Resource Survey of the Durand Mill Property, DeKalb County, Georgia.

- 1992 Field Director, Garrow & Associates, Inc., Phase I surveys at Watts Bar and Chickamaugua Reservoirs.
- 1990-1992 Project Principal Investigator, East Liverpool Data Recovery Project. Excavation of six domiciles and two industrial potteries (1802-1900).
- 1989 Principal Investigator, excavation of the Goodwin-Baggot Pottery Site (33Co142).
- 1988 Principal Investigator, survey of East Liverpool pottery sites.
- 1986 Field Director, GAI Consultants, Inc., Phase II Testing, Mickey Site, Belmont County, Ohio.
- 1985 Co-Director, University of Steubenville Archaeological Field School. Directed excavations at two historic domiciles (1790 and 1840) in Wellsburg, West Virginia.
- 1984 Co-Director, University of Steubenville Archaeological Field School. Directed excavations at three nineteenth-century urban sites in Wellsburg, West Virginia.
- 1984 Principal Investigator, Hanna's Town (36Wm203) Archaeological Testing Program, Westmoreland County, Pennsylvania. Responsible for determining the town boundaries of the eighteenth century settlement.
- 1983 Co-Director, University of Steubenville, Archaeological Field School. Excavated late nineteenth century domestic structure in Steubenville, Ohio.
- 1981 Field Archaeologist, Archaeological Assessments, Inc., Survey of archaeological sites in the Ouchita National Forest, Arkansas.
- 1980-1981 Principal Investigator, Sprucevale Pottery (33Co62), Columbiana County, Ohio.
- 1979 Field Technician, Carnegie Museum of Natural History, Pittsburgh, Pennsylvania. Nineteenth-century domestic site, Neville House (36Al29).
- 1979 Principal Investigator, Archaeological survey of the Little Beaver Creek Drainage, Columbiana County, Ohio.
- 1978 Graduate Teaching Fellow, University of Pittsburgh. Directed laboratory operations at the Mungai Farm sites.

- 1977 Graduate Teaching Assistant, University of Pittsburgh. Participated in the excavation of the Meadowcroft Rockshelter (36Wh297) and directed the field laboratory.
- 1976 Crew member, Youngstown State University. Participated in excavation of nineteenth-century sites Austin Log Cabin (33Mh11) and Eaton-Hopewell Furnace (33Mh9).
- 1974-1975 Crew member, Youngstown State University. Participated in excavation of Woodland/Archaic site (33Me61), Mercer County, Pennsylvania.

Papers and Publications

- 1995 "The Great Decal Debate: New Perspectives on a Polychrome Problem." Senior Author with Teresita Majewski. Paper presented at the 28th Annual Meeting of the Society for Historical Archaeology, Washington, D.C.
- 1995 "Reconciling the Archaeological Record with the Civil War Military Record: 1993 Investigation of the Chattahoochee River Line Defenses." Junior Author with Laura B. Reidy. Paper presented at the 28th Annual Meeting of the Society for Historical Archaeology, Washington, D.C.
- 1994 "The Archaic West of the Allegheny Mountains: A View from the Cross Creek Drainage, Washington County, Pennsylvania." With James M. Adovasio, Anthony Quinn, and Dennis Dirkmaat. Paper presented at the 65th Annual Meeting of the Society for Pennsylvania, Pittsburgh, Pennsylvania.
- 1994 "The Last Redoubt: Archaeological Interpretations of Military Engineering at Fort Tyler, West Point, Georgia." Paper presented at the 27th Annual Meeting of the Society for Historical Archaeology, Vancouver, British Columbia, Canada.
- 1993 "Archaeological Investigations at Fort Tyler, West Point, Georgia." Paper presented at the 1993 Annual Meeting of the Society for Georgia Archaeology, Red Top Mountain State Park, Georgia.
- 1992 "Evaluation of the Home Lot Concept as a Means to Study Households." Paper presented at the 57th Annual Meeting of the Society for American Archaeology, Pittsburgh, Pennsylvania.
- 1990 "Madness and Blindness and Confusion of Mind: Historic Ceramic Analysis in the Ohio Valley." Paper presented at the eighth Annual Meeting of the Symposium on Ohio Valley Urban and Historic Sites Archaeology, East Liverpool, Ohio.

the Air Force, Directorate of Contracting and Management, Warner Robins Logistics Center, Robins Air Force Base, Georgia.

1993 "Cultural Resources Survey of the 5.51 Acre Tract for the 115/12kV Sandy Plains Substation, Cobb County, Georgia." With Geraldine E. Baldwin. Garrow & Associates, Inc. Report submitted to the Oglethorpe Power Corporation, Tucker, Georgia.

1993 "Phase II Testing at Sites 9HT8 and 9HT37 On Robins Air Force Base, Houston County, Georgia." With William F. Stanyard. Garrow & Associates, Inc. Report submitted to the Robins ALC, Robins Air Force Base, Warner Robins, Georgia.

1993 "The Last Redoubt: Archaeological Investigations at Fort Tyler, West Point, Georgia." Garrow & Associates, Inc. Report submitted to the Fort Tyler Association, Inc., West Point, Georgia.

1992 "Phase I Cultural Resource Survey of the Durand Mill Property, Lots 4 and 52, DeKalb County, Georgia." Garrow & Associates, Inc. Report submitted to Blair and Chewning, Inc., Tucker, Georgia.

1992 "Phase I Investigations at the Watts Bar Dam and Lock, Meigs County, Tennessee." Garrow & Associates, Inc. Report submitted to Tennessee Valley Authority, Cultural Resources Program, Norris, Tennessee.

1992 "Phase I Investigations at the Chickamauga Dam, Hamilton County, Tennessee." Garrow & Associates, Inc. Report submitted to Tennessee Valley Authority, Cultural Resources Program, Norris, Tennessee.

1985 "Wellsburg Urban Research Program: Final Report." Ms. on file, the Department of Culture and History, Charleston, West Virginia.

1980 "Preliminary Analysis of the Fort Steuben Historic Ceramics." Ms. on file, the University of Steubenville.

1979 "Preliminary Analysis of the Carthage Faunal Remains." With Jeffrey H. Schwartz. Ms. on file, the Department of Prehistory and Archaeology, University of Sheffield, England.

1979 "An Archaeological Sampling Reconnaissance of the Little Beaver Creek Drainage, Columbiana County, Ohio." Ms. on file, the Ohio Historic Preservation Office, Columbus, Ohio.

Book Reviews

1993 Carskadden, Jeff and Richard Gartley. *Chinas: Hand-painted Marbles of the Late 19th Century*. Review in *West Virginia Archaeologist*.

1989 Krause, Corrine Azen. *Refactories: The Hidden Industry*. Review in *Pittsburgh History* 72(1): pp. 59. The Historical Society of Western Pennsylvania, Pittsburgh, Pennsylvania.

1984 Murguia, Edward. *Chicano Intermarriage: A Theoretical and Empirical Study*. Review in *Ethnic Forum* 4(1-2): pp. 42-43. Kent State University Press, Kent, Ohio.

1984 Fite, Gilbert C. *American Farmer: The New Minority*. Review in *Ethnic Forum*. 3(1-2): pp. 38-39. Kent State University Press, Kent, Ohio.

Research Grants Received

1990 Joint Council for the Arts and Humanities (Grant H90-35), "Art Through Industry: Ohio Dinnerware," \$7,500.00.

1988 Ohio Humanities Council (Grant 88-012), "War of the Rebellion: Ohio Views of the Civil War," \$1,200.00

1979 Ohio Historic Preservation Office, Survey and Planning Grant, Survey of the Middle Fork of the Little Beaver Creek, Columbiana County, \$2,500.00.

Laura B. Reidy
Garrow & Associates, Inc.

Education

Bachelor of Arts in History, Kennesaw State College, 1991
Minor: Native American Studies

Specialized Training

Geophysics Techniques Training Course, Pinon Canyon, Colorado, 1991
Section 106, National Historic Preservation Act Training, Atlanta, Georgia, 1991
Archaeological Resources Protection Act Seminar, Atlanta, Georgia, 1988

Areas of Specialization

Analysis of lithics, prehistoric ceramics, and historic ceramics; historic ceramic vessel analysis; historic cemetery studies and investigations

Professional Experience

- | | |
|--------------|--|
| 1991-Present | Senior Research Assistant, Garrow & Associates, Inc., Atlanta, Georgia. Duties include supervision of laboratory and field technicians, cemetery investigations, fieldwork on various projects, analysis of prehistoric and historic artifacts, computerization and data manipulation of artifacts and site information. |
| 1989- 1991 | Assistant Archaeologist, Cobb County Archaeology Section, Marietta, Georgia. Duties included interdepartmental relations, supervision of technicians, management of daily operations of section, general fieldwork and identification of historic human burials. |
| 1988-1989 | Field Technician, Cobb County Archaeology Section, Marietta, Georgia. Duties included Phase I surveys of proposed developments and fieldwork for various testing and data recovery projects. |

Field Experience on Selected Projects

- 1994 Assistant Field Director for 9CO357 Phase III, Kennesaw, GA. Included test unit excavation within a Civil War era trench and controlled surface search for features.
- 1994 Senior Research Assistant for 9HT40 Testing, Robins Air Force Base, Warner Robins, GA. Included test unit excavation, as well as data and artifact organization on an intact prehistoric site.
- 1993-94 Senior Research Assistant for Georgia International Horse Park, Rockdale County, GA. Included Phase II testing and organization of artifacts and data collected from several prehistoric sites
- 1993 Senior Research Assistant for Johnston's River Line Survey, Cobb County, GA. Included shovel testing and mapping of Civil War fort and entrenchments.
- 1993 Senior Research Assistant for Banks County Landfill Survey, Banks County, GA. Included shovel testing, mapping, and site delineation of over 20 prehistoric and historic sites.
- 1993 Senior Research Assistant for Barrett Parkway 9 Testing, Cobb County, GA. Included metal detector and shovel testing, test unit excavation, and mapping of Civil War trenches.
- 1993 Senior Research Assistant for Rocky Mountain Pinson Testing, Rome, GA. Included site delineation along an 18 mile transmission line, followed by shovel testing and test unit excavation for several prehistoric and historic sites.
- 1993 Senior Research Assistant for Pine Ridge Cemetery, Gwinnett County, GA. Included identification of human burials and cemetery boundaries through probing.
- 1992 Senior Research Assistant for Fort Tyler Testing, West Point, GA. Included shovel testing, test unit excavation, and mapping of a Civil War fort.
- 1992 Senior Research Assistant for Hopewell Cemetery Revisit, Norcross, GA. Included the systematic removal of four burials for relocation.
- 1992 Field Director for West Carrington Subdivision Survey, Cobb County, GA. Included supervision of three-person crew conducting shovel tests and mapping of the site.

- 1992 Senior Research Assistant for Duluth Cemeteries, Duluth, GA. Included identification of human burials and cemetery boundaries through probing.
- 1992 Senior Research Assistant for Ellejoy Creek Testing, Maryville, TN. Included testing of a prehistoric site.
- 1992 Field Technician for Haig Mill Testing, Dalton, GA. Included testing of prehistoric sites and mapping of a historic site.
- 1991 Senior Research Assistant for Grace Memorial Testing, Charleston, SC. Included testing of a historic site.
- 1991 Field Technician for Rome-Etowah Sewer Line, Rome, GA. Included controlled surface collection and testing of several prehistoric sites.
- 1991 Supervisor for Allatoona Creek Sewer Line, Cobb County, GA. Included survey and shovel testing.
- 1991 Supervisor for Clebourne Overlook Development, Cobb County, GA. Included testing and limited preservation of Civil War entrenchments.
- 1991 Field Technician for Sweetwater Town Site, Mableton, GA. Included testing of prehistoric village site.
- 1991 Liaison archaeologist for East-West Connector IV, Phases II and III, Cobb County, GA. Included coordination between the Army Corps of Engineers, the Historic Preservation Section of the Georgia Department of Natural Resources, the archaeological consulting firm, and the public.
- 1990 Supervisor for New Salem Cemetery Project, Cobb County, GA. Included probing for and excavation of historic human burials
- 1990 Supervisor for Circuit City/Noonday Creek Development, Cobb County, GA. Included testing of a prehistoric lithic site.
- 1990 Supervisor for Shipp Cemetery Project, Cobb County, GA. Included probing for historic human burials and cemetery boundaries.
- 1990 Supervisor for Mable House Project, Cobb County, GA. Included testing of a historic site.
- 1990 Liaison archaeologist for Home Depot Development Site, Kennesaw, GA. Included coordination between development firm, archaeology firm and public. Resulted in preservation of Civil War earthworks.

- 1990 Field Technician for Stanley Road Cemetery Project, Cobb County, GA. Included probing for historic human burials and boundaries of cemetery.
- 1990 Field Technician for Discovery Development, Cobb County, GA. Included testing of a prehistoric lithic site.
- 1990 Field Technician for Flemister Cemetery Project, Cobb County, GA. Included probing for historic human burials and boundaries of cemetery.
- 1989 Field Technician for United Parcel Service Development, Cobb County, GA. Included mapping of Civil War gun emplacements.
- 1988 Field Technician for Standing Peachtree Site (9CO297), Cobb County, GA. Included testing and data recovery at a prehistoric village site.

Professional Laboratory Experience on Selected Projects

- 1995 West Georgia Reservoir, Brehmen, GA. Included analysis of prehistoric artifacts collected from a Phase II investigation.
- 1994 Inventory Director, Cobb County Archaeology Laboratory, Marietta, GA. Included organization and inventory of all paperwork, library materials, and artifacts from a 25 year period, as well as report production for the project.
- 1994 Senior Research Assistant, Georgia International Horse Park, Rockdale County, GA. Included analysis of prehistoric artifacts collected from a Phase II investigation.
- 1994 Senior Research Assistant, 9HT40, Robins Air Force Base, Warner Robins, GA. Included analysis of prehistoric artifacts.
- 1993 Senior Research Assistant, Banks County Landfill Survey, Banks County, GA. Included analysis of prehistoric and historic artifacts.
- 1993 Senior Research Assistant, US Courthouse Knoxville Testing, Knoxville, TN. Included analysis of early historic artifacts.
- 1993 Senior Research Assistant, Rocky Mountain Pinson Survey, Rome, GA. Included prehistoric lithic analysis.
- 1992 Lab Technician, Chickamauga Survey, Chickamauga Reservoir, TN. Included analysis of prehistoric lithics and ceramics.

- 1992 Senior Research Assistant, Maplewood, VA, Data Recovery Project. Included historic artifact analysis and ceramic vessel analysis.
- 1992 Senior Research Assistant, Haig Mill Testing, Dalton, GA. Included prehistoric lithic analysis.
- 1992 Senior Research Assistant, Rome-Etowah Sewer Line Project, GA. Included prehistoric lithic and ceramic analysis.
- 1992 Senior Research Assistant, East-West Connector Project, Cobb County, GA. Included historic artifact analysis and ceramic vessel analysis.

Technical Reports

- 1994-1995 *Report of Findings of an Inventory and Assessment of the Cobb County Archaeological Laboratory.* Co-authored with Patrick H. Garrow. Submitted to Cobb County Department of Community Development.
- 1993 *Phase II Testing of Cultural Resources within the Barrett Parkway Extension Project, Cobb County, Georgia.* Co-authored with Robert J. Fryman and Jeffrey L. Holland. Submitted to Cobb County Department of Transportation, Cobb County, Georgia.

Papers Presented

- 1995 *Reconciling the Archaeological Record with the Civil War Military Record: 1993 Investigations of the Chattahoochee River Line Defenses.* Senior author, presented at the 28th Annual Meeting of the Society of Historical Archaeology.

Appendix 2: Tennessee State Site Form

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF ARCHAEOLOGY
SITE SURVEY RECORD

PART A

DIVISION USE ONLY

STATE SITE NUMBER: 40 []

NATIONAL REGISTER STATUS: [] DATE NUMBER ASSIGNED: [/ /]
RESURVEY: []

GENERAL SITE INFORMATION

1. NAME/FIELD SITE NUMBER: Spring Hill: 1776-1
2. SITE TYPE(S): 1241 / 0099 / / / / / / / / / /
3. CULTURAL AFFILIATIONS(S): 0023 / 0001 / / / / / / / / / /
4. HISTORIC DATE RANGES(S): 05 / / / / / / / / / /
5. RADIOCARBON DATES (Y/N): No (If (Y) complete PART F)
6. HUMAN REMAINS CODE: 05 7. OWNERSHIP TYPE CODE: 02

LOCATIONAL AND BOUNDARY INFORMATION

8. COUNTY: Maury 9. PHYSIOGRAPHIC DIVISION: 00
10. QUAD NUMBER: 64-NW QUAD DATE: 1982
11. NORTH LATITUDE: WEST LONGITUDE:
12. UTM: Zone: 16 Easting: 506000 Northing: 3954840
13. ELEVATION: 740 (AMSL) 14. DRAINAGE CODE:
15. SIZE OF SITE: Long axis 2987 Short axis: 2865 Area: 0
16. BASIS FOR SIZE ESTIMATE: 05 17. BOUNDARY ACCURATE (Y/N): Yes
18. TAX MAP/PARCEL NUMBER (if available):

SURVEY AND REPORTING INFORMATION

19. LAND USE/GROUND COVER: 02 20. PERCENT SITE DISTURBANCE: 07
21. REPORTED BY: Name Robert J. Fryman Telephone
Address 3772 Pleasantdale Road
Atlanta, GA 30340
22. REPORTER TYPE: 01
23. AFFILIATION: Garrow & Associates, Inc.
24. INVESTIGATION STATUS CODE: 03 25. DATE OF SURVEY: 06/12/95
26. PHOTOGRAPHS: Yes 27. COLLECTIONS: Yes 28. COMPLIANCE: No



CN-0919

PREHISTORIC SITE/COMPONENT

SITE NO.: 40

REPORT DATE: 07/14/95

1. SITE DESCRIPTION/COMMENTS:

The site consists of a lithic scatter of debitage. The material is mainly from naturally occurring chert; although some Ridge & Valley chert is present. Tools, such as retouched flakes or biface fragments, were discovered occasionally. No diagnostic projectile points or ceramics of any sort were recovered.

2. OWNERSHIP:

Name: Adams Realty
Address: 921 Saratoga Drive
Brentwood, Tennessee 37027
Phone:
Tenant:

3. BIBLIOGRAPHIC REFERENCES:

4. LOCATION OF ADDITIONAL INFORMATION:

A core areas of the battlefield is located on a knoll on Ira Adams' property overlooking a small creek. Other cultural activity on the knoll includes portions of a Civil War battlefield and a possible mid 19th century house site.

REPORTER: Robert J. Fryman, Garrow & Associates, Inc.

HISTORIC SITE/COMPONENT

SITE NO.: 40

REPORT DATE: 07/14/95

1. SITE DESCRIPTION/COMMENTS:

The Spring Hill Battlefield core areas are owned by Adams Realty Company and Weaver Farms. The Weaver property is currently being purchased by the Association for the Preservation of Civil War Sites (APCWS).

2. OWNERSHIP:

Name: Adams Realty
Address: 921 Saratoga Drive
Brentwood, Tennessee 37027
Phone:
Tenant:

3. SITE HISTORY:

Spring Hill was the site of a major Civil War engagement fought on November 29, 1864 as part of Confederate General John Bell Hood's Tennessee Campaign. Hood's Army of Tennessee hoped to destroy the Federal army commanded by General James M. Schofield but failed in the attempt.

4. PERSONS ASSOCIATED:

General James Schofield, Colonel Emerson Updycke, General Nathan Bedford Forrest, General Patrick Cleburne, General John Bell Hood

5. ASSOCIATED BUILDINGS (EXTANT OR PREVIOUSLY EXISTING):

None standing. A dense scatter of antebellum household and architectural debris is associated with Bradley's Knoll. These materials may represent a house structure burned during the fighting on November 29, 1864.

6. BIBLIOGRAPHIC REFERENCES:

White Star Consulting (1995) Preservation Action Plan for the Spring Hill, Tennessee Battlefield. White Star Consulting, Huntsville, Alabama. Submitted to the Association for the Preservation of Civil War Sites, Fredericksburg, Virginia.

Fryman, Robert J. and Laura B. Reidy (1995) "They Was In There Sure Enough": A Limited Archaeological Assessment of the 1864 Civil War Battlefield at Spring Hill, Tennessee. Garrow & Associates, Inc., Atlanta. Submitted to the Spring Hill Battlefield Preservation Council, Spring Hill, Tennessee.

7. LOCATION OF ADDITIONAL INFORMATION:

REPORTER: Robert J. Fryman, Garrow & Associates, Inc.

ARTIFACT INVENTORY

SITE NO.: 40

REPORT DATE: 07/14/95

From the field northeast of Rippavilla (Area 1)

- 3 horseshoes
- 3 fragments of barbed wire
- 1 bolt
- 1 linked chain
- 1 plow share fragment (not collected)
- 1 bracket

From Weaver's Hill (Area 2):

- 1 Borman's fuse from exploded shell (not collected)
- 1 spent bullet (Civil War era) (11.6 g)
- late 20th century material (i.e. aluminum can fragments, tin foil)

From Ira Adam's Property (Area 3):

- 1 12 pounder shell fragment (not collected)
- other shell frag? (not collected)
- 1 cal. bullet (Civil War era) (not collected)
- plain yellow ware (not collected)
- plain cc ware (not collected)
- blue and green impressed edgeware (not collected)
- mid-nineteenth century ironstone (not collected)
- burned and melted glass and various ceramics (not collected)
- brick and square nail fragments (not collected)

*all artifacts not collected were photographed from as many angles as possible.

REPORTER: Robert J. Fryman, Garrow & Associates, Inc.

TDOA SITE SURVEY RECORD--PART E

COLLECTIONS

SITE NO.: 40

REPORT DATE: 07/14/95

ARTIFACT COLLECTIONS

REPOSITORY: Garrow & Associates, Inc. Atlanta, GA 30340

ACCESSION NUMBERS: 428

COLLECTION SIZE: 9 artifacts

COMMENTS:

PHOTOGRAPHS

REPOSITORY: Garrow & Associates, Inc Atlanta, GA 30340

ACCESSION NUMBERS:

MEDIA TYPE(S) : 35 mm black & white;

QUANTITY: 50 exposures each

COMMENTS:

REPORTER: Robert J. Fryman, Garrow & Associates, Inc.

RADIOCARBON DATE RECORDING SHEET

SITE NO.: 40

REPORT DATE: 07/14/95

LABORATORY REVERENCE NUMBER:

RADIOCARBON AGE:

SAMPLE TYPE:

SAMPLE PROVENIENCE/ASSOCIATIONS:

PUBLISHED REFERENCE:

=====

LABORATORY REVERENCE NUMBER:

RADIOCARBON AGE:

SAMPLE TYPE:

SAMPLE PROVENIENCE/ASSOCIATIONS:

PUBLISHED REFERENCE:

=====

LABORATORY REVERENCE NUMBER:

RADIOCARBON AGE:

SAMPLE TYPE:

SAMPLE PROVENIENCE/ASSOCIATIONS:

PUBLISHED REFERENCE:

REPORTER: Robert J. Fryman, Garrow & Associates, Inc.